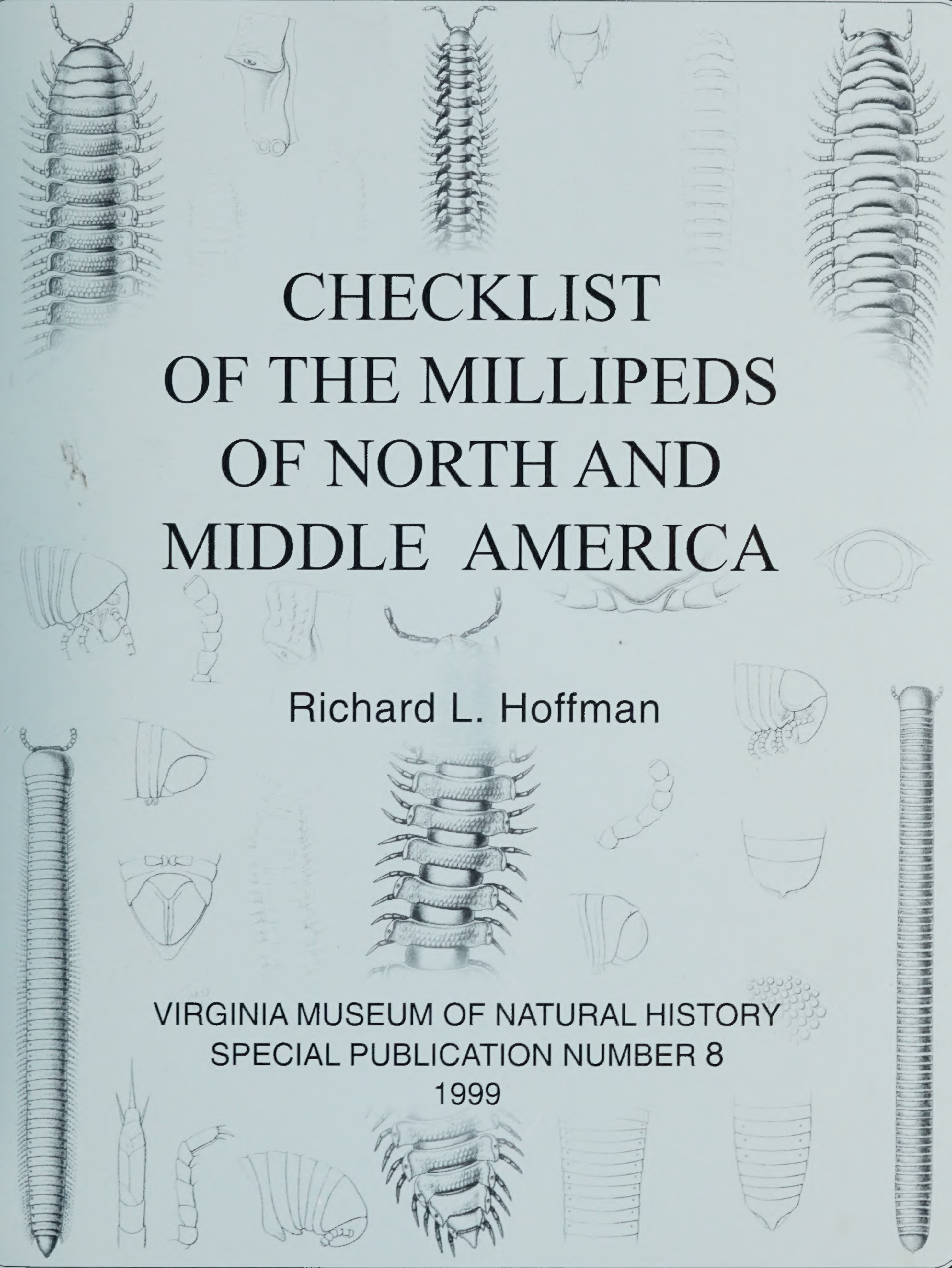

CHECKLIST OF THE MILLIPEDS OF NORTH AND MIDDLE AMERICA

Richard L. Hoffman

VIRGINIA MUSEUM OF NATURAL HISTORY
SPECIAL PUBLICATION NUMBER 8
1999

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After insects and arachnids, millipeds (Diplopoda) constitute the third largest group of Arthropoda, a diverse class of about 10,000 known species dispersed among fifteen orders. Neglected for decades by all but a small number of taxonomists, millipeds are gradually becoming recognized as important members of the soil and litter biotopes around the world. Aside from their role in soil formation, these animals provide exceptionally valuable materials in the study of biogeography and evolution, and an increasing number of singular life styles and behavior patterns are becoming known. It is possible to identify the beginning of an era in which millipeds will receive the appreciation and investigation that they deserve.

Since probably less than 20% of the actual world fauna has yet been described, with nearly all of the families urgently requiring revisionary study in order to provide a meaningful organization of their relationships, basic taxonomy will merit the highest priority for many years to come. Regional annotated lists offer important access to faunas of specified areas, giving a baseline synopsis of existing taxonomic knowledge, and entree into the essential literature sources. Such lists for North America (1958) and Central America (1968) are now largely obsolete as the result of many additions and changes during the past several decades, and the fauna of the West Indies has not been summarized since 1918.

The "Checklist of the Millipeds of North and Middle America" provides a complete summary of the rich fauna for the entire north of Columbia and Trinidad, treating a total of 2167 species considered valid. It not only incorporates the numerous taxonomic innovations of the past thirty years, but presents complete bibliographic information on the nearly equal number of names provisionally considered to be invalid synonyms. Each entry encapsulates data about original description, major subsequent changes in status or affiliation, location of type material, brief statements of distribution, and references to any published maps. Those species of still-uncertain status are grouped under specific categories, often with hints concerning their possible identity. The literature list contains nearly 800 titles of mostly of mostly taxonomic papers relevant to the area covered.

CHECKLIST OF THE MILLIPEDS OF NORTH AND MIDDLE AMERICA

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Richard L. Hoffman

Department of Recent Invertebrates
Virginia Museum of Natural History

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HARVARD
UNIVERSITY

Printed and bound in the United States of America
Virginia Museum of Natural History, Martinsville, Virginia 24112

ISBN 1-884549-12-8

Cover and book design by Lisa Perrell

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Dedication

Commemorating the accomplishments of

Henri DeSaussure
(1829-1905)

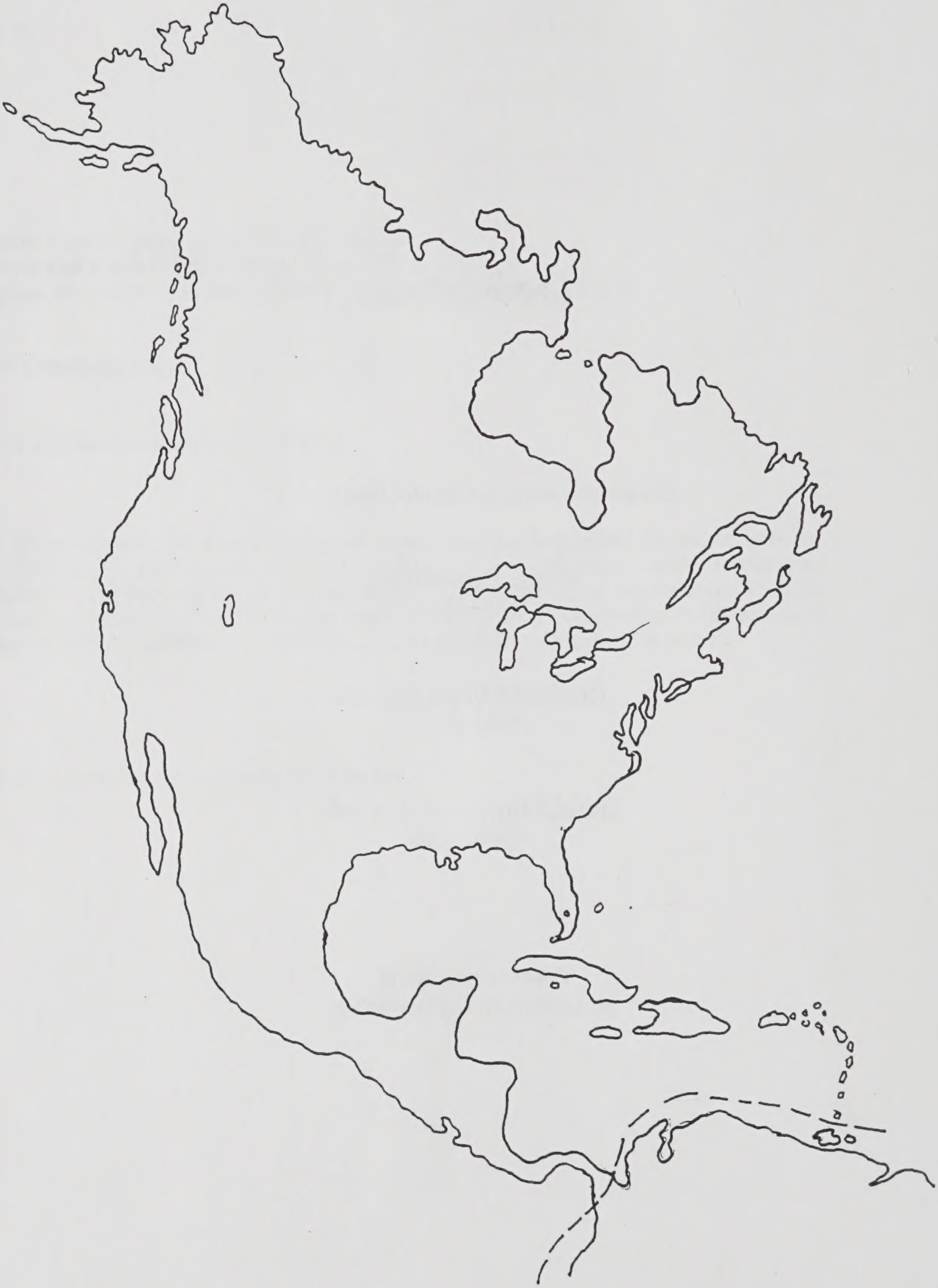
Reginald Innes Pocock
(1863-1947)

Harold Frederick Loomis
(1896-1976)

Facile principes of
Mesamerican Diplopodology

Published by the Virginia Museum of Natural History, with support from the Integrated Taxonomic Information System (ITIS) through a grant from the United States Environmental Protection Agency, and from NSF Grant DEB 9712438 to Petra Sierwald (The Field Museum, Chicago), and W.A. Shear (Hampden-Sydney College).

Date of Publication: 7 September 1999



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Introduction

> *Wenn sich die Weisen nicht zuweilen verirteten, so müssten alle Narren versagen.*
>
> . . . .Johann Wolfgang von Goethe

> I may freely, without shame, leave some obscurities to happier industry, or future information.
>
> . . . .Samuel Johnson

Checklists and catalogues are regarded with disdain by some biologists who consider them mere hackwork, compiled from literature and devoid of phylogenetic insights. Systematists who are actually involved in transferring knowledge about the characteristics, relationships, and distribution of poorly-known organisms from the alpha to gamma level (thus making it accessible to theoreticians) tend to be more generous. There are no references more fundamental than comprehensive summaries of current knowledge, and the efforts of assembling and organizing information from a vast polyglot literature into a compact and manageable form are highly appreciated by subsequent users. A checklist or catalog is often the catalyst that initiates or stimulates active interest in some neglected taxon, and whether one concurs with the details of presentation is immaterial so long as all the facts are available. It is often overlooked that the basic purpose of such compendia is to facilitate their own obsolescence.

An increasing interest in tropical biotas during the past several decades allows a guarded hope that the importance of millipeds in such ecosystems will be recognized and investigated. Although three annotated checklists have been published (West Indies: Chamberlin, 1918; North America: Chamberlin & Hoffman, 1958, and Middle America: Loomis, 1968 respectively), they are now obsolete and inadequate. As the faunas of these regions are now amenable to a revised treatment, this occasion is taken to provide a comprehensive, updated, summary of the diplopod fauna of the entire area north of the South American mainland. Although the lists mentioned provided the baseline resources, the addition of information they did not contain has required consultation of all original references *de novo.*

Organizational Details

The area

The names applied to the major geographic areas of the Western Hemisphere have been both highly diverse and highly inconsistent. Sometimes Mexico is included in "North America", sometimes in "Central America", sometimes Central America has included Mexico, sometimes only the countries from Guatemala to Panama. Some maps extend North American all the way to the border of Colombia. The West Indies have rarely been associated with any parts of the mainland under an inclusive name.

Existing data are simply organized by political units, and will be for a long time. Since the definitions and terminology for the region between the United States and northernmost South America have been arbitrary and apparently very subjective anyhow, I feel no compunction in adopting my own equally arbitrary concepts and categories for the purposes of this list. It must be obvious that political boundaries are in the present state of knowledge more pragmatically useful than anything approaching biogeographic regions (e.g., Nearctic vs. Neotropical, each with its local subdivisions).

The fauna of the West Indies has clearly been derived from land masses to the west and south, and there being no endemic components, there is no reason to award a special status to these islands. My operational categories are defined as follows:

I. North America: United States and Canada.
II. Middle America (the terms Mesamerica and Mesamerican are frequently used in the text)
  1. Mexico
  2. Central America: Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama
  3. West Indies
    A. Greater Antilles: Cuba, Jamaica, Puerto Rico, Hispaniola, Bahamas, Turks and Caicos, Virgin Islands, and Saint Croix (in effect, all islands west of the Anegada Passage)
    B. Lesser Antilles: all islands south of the Anegada Passage, from Anguilla to Grenada.
III. South America: all countries south and east of (and including) Colombia, Venezuela, and the continental islands from Aruba to Tobago, which are geographically part of South America even if frequently included in the Lesser Antilles on some maps. In this respect, I depart from the precedent of Pocock (1894), Chamberlin (1918), and Loomis (1934), all of whom included Trinidad and Tobago in their concept of "West Indies".

Information content

The material presented in the following pages is strictly taxonomic, not bibliographic. No attempt is made to cite all published references to the included taxa. A departure from the formats of the 1958 and 1968 lists is omission of keys to orders and families. For these to be accurate and meaningful, extensive illustration would be required. However, citations to relevant taxonomic sources (keys, revisions, redescriptions, etc.) are included under the pertinent heading level. Full reference to original description, type locality, and location of type specimens for **all** names is provided to enhance accessibility to names currently treated as junior synonyms since the disposition of such names is usually subjective and open to subsequent revision. The user is spared the trouble of having to go back to original sources for "synonym information."

The treatment of taxa at all levels reflects the most recent published concepts, except in a few cases in which the compiler holds a different opinion and explains his position in a short discourse under the relevant category heading.

Entries for the 2,167 species provisionally admitted as valid include the usual reference citation to original description, type locality, and location of holotype (or syntypes), the last shown parenthetically by acronym code (the list is given in the following paragraph). Synonyms are listed chronologically with the same information; for widespread anthropochoric species only those synonyms based upon specimens taken from within the area of coverage.

Known species ranges are given in very general terms, supplemented by reference to any published distribution maps. The absence of a sideheading "Range:" implies that the taxon is known only from the type locality (**or** very close thereto: numerous localities in a single county or similar unit are usually not specified).

The only fossil taxa recorded are a few of Tertiary or Quarternary age, some of which may be the same as species still existing in or near their type localities.

Citations to journals are spelled out with the standard title abbreviations rather than given simply as a year and page number. This takes up a little more space, but obviates the necessity to refer to a list of the cited papers in a terminal bibliography which I personally consider an unnecessary nuisance. Additional bibliographic information, inserted at the relevant place throughout the text, is preceded by explanatory terms.

A special case is provided by the "Bulletin of the University of Utah" which for many years appeared with a separate category called the "Biological Series", with its own independent volume numbering system. Thus volume 31, no. 11, was simultaneously volume 6, no. 4, of the Biological Series. As I believe that most libraries would catalog this periodical in terms of its primary issuance system, I have disregarded the "Biological Series" subseries and cite all references in terms of the primary volume numbers. This is in contrast to the checklists by Chamberlin & Hoffman (1958) and Loomis (1968), as well as most references to Chamberlin's papers by recent investigators. It is however consistent with the usage of Jeekel's "Nomenclator" (1971).

Various journals (e.g., the Bulletin of the University of Utah, the *Bolletino* of the Museum of Zoology and Comparative Anatomy of the University of Torino) have appeared as volumes composed of sequential articles, each with its own pagination. In such cases, I have included the relevant article number parenthetically after the volume number, thus "60(8):". When pagination has run continuously throughout the volume, it has seemed unnecessary to cite the article number. Some journals (including the Proceedings of the U. S. National Museum), have alternated both the "article" and continuous pagination at different times, requiring attention to this point.

The bibliography contains just over 770 entries, and contains only those papers of strictly taxonomic and/or nomenclatorial content except in a few cases in which a treatment of biology, structure, or distribution contains relevant information.

Entries are thought to be complete up to the end of 1998; a few still "in press" are included.

Type localities

Generally, type localities are cited in standard size order, from the locality itself upward through larger political units; this is often a reverse of the original sequence as printed. The type localities of species described in languages other than English are often quoted in the original when this seemed desireable (e.g., when something might be lost in translation). I have tried to locate many places that were not clearly specified in the original description, but not consistently so - some things are left for a later generation to run down. Many place names, especially in Guatemala, are those of small ranches (*fincas*) not shown on most maps. Where possible I have provided distance and direction from the nearest mapped settlement. Cuba has provided a special problem in that the original four provinces have been recently divided into fourteen and I am not sure I have correctly allocated all localities into their new categories.

Type specimen depositories

For most North American names, the location (or existence) of the type material has been established. In some instances, material once thought to be lost is discovered through routine curatorial activity. Type material of Middle American taxa is less well-known, and lectotypes have yet to be designated for many of them. This is especially true for material in European collections. So far a detailed list of type holdings in millipeds has been published only for the historically important collection at Berlin (Moritz & Fischer, 1973, 1974, 1975, 1978). This document is beyond praise for its thorough coverage and ease of use, and ironically was produced by a government not celebrated for its affluence. During the time period 1960-1997 I was able to visit the majority of the most significant European milliped collections; frequently a personal visit was the only way to locate the desired material even though it might be maintained in excellent condition.

It is an accepted liability of most taxonomic work that type material has often been lost or misplaced in the past, or sometimes destroyed during wartime events. Occasionally, an investigator will deposit types in a collection other than the one specified in publication, or under a different name from that published. Sometimes, a preoccupied name will be replaced by a later worker, without the change being noted on the type material records, usually because museums rarely are staffed by anyone knowledgeable in an arcane branch of zoology such as myriapodology. Coping with such problems becomes routine and with the passage of time they are gradually detected and managed in some way. In fact, the element of solving some of the Sphingian riddles that infest milliped taxonomy becomes a source of some intrinsic interest and pleasure of its own, and the ability to turn adversity to advantage is especially useful to anyone following on the trail of such predecessors as Chamberlin and Verhoeff.

Sometimes type material, particularly of taxa named by Chamberlin and Causey, never found its way to the stated depositories as published. For example, only a part of the species named by Chamberlin in his 1947 paper on material belonging to the Academy of Natural Sciences of Philadelphia are present in that institution, and only one or two of those named in his 1914 paper on Costan Rican millipeds. In general, "missing" types of species named by him between 1912 and 1925 may be located at the Museum of Comparative Zoology. Anything after that date was probably retained in his personal collection, and is possibly now in the U. S. National Museum of Natural History. During the period 1950-1955, Dr. Causey was careful to send types to the collections that she specified in the descriptions; in later years there was frequent default. Both of these authors occasionally changed the name originally assigned to new species, without making the necessary change to the vial label, resulting in type specimens standing under unpublished names. As a rule it is possible to recognize such problems and solve them by matching up names with published type data. Eventually all will be accounted for, but not all missing types can be expected to show up.

The loss of much of the material described by Pocock in the "Biologia Centrali-Americana" is a source of special concern. Pocock left the British Museum in 1903 to become director of the Zoological Society of London's menagerie at Regent's Park, at which new location he wrote most of the parts treating Diplopoda. For whatever reason, only a small part of the types and other material described in the later fascicles was returned to the Museum, e.g., several species of Sphaeriodesmidae. This is not to say that the specimens are lost forever; perhaps they reside (dry) in some neglected packing box in some obscure corner and will someday be discovered through a miracle of serendipity.

Types of the Mesamerican taxa named by DeSaussure are for the most part still present in the Geneva collection, and not in Paris (except as occasional duplicates) as was assumed by Cook (1898, for instance). Some of the species, later considered to have been misidentified and renamed solely on the basis of published information, still retain their original labels and are not indicated as types of the new names.

The enormous personal collection built up by Professor Chamberlin at the University of Utah was transferred in 1972 to the National Museum of Natural History, Washington (USNM), resulting in the presence there of the world's greatest accumulation of milliped types. The vast majority of taxa proposed by him during the years 1925-1962 are represented by type material, since he retained paratypes, whenever possible, from type series belonging to other museums, in addition to that belonging to his personal collection.

Lastly, the types of a large number of North American species described by Dr. R. M. Shelley from 1975 to 1995, were transferred to the National Museum from the North Carolina StateMuseum of Natural Sciences, the originally stipulated depository (vide Shelley, 1996: 8).

To the extent of my knowledge, the known (or presumed) location of all holo-, neo-, and lectotypes is indicated by an acronym (see following list) following citation to the original description. Also to the extent known, the sex of the specimen(s) is entered as well. I anticipate that this category of data will be refined and upgraded by future research. A few small collections with only a few types have been indicated by an abbreviated name rather than acronym.

AMNH - American Museum of Natural History, New York
ANSP - Academy of Natural Sciences, Philadelphia
BMNH - British Museum (Natural History), London [currently "The Natural History Museum"]
CAS - California Academy of Sciences, San Francisco
FMNH - Field Museum of Natural History, Chicago
FSCA - Florida State Collection of Arthropods, Gainesville
HNHM - Hungarian Natural History Museum, Budapest
INHS - Illinois Natural History Survey, Urbana
ISNB - Institute Royal des Sciences Naturelles, Brussels
LACM - Natural History Museum of Los Angles County, California
LEAP - Laboratorio de Entomologia Agraria, Portici
MNHG - Museum d'Histoire Naturelle, Genève
MNHNCu - Museo Nacional de Historia Natural, La Habana
MHNP - Museum National d'Histoire Naturelle, Paris
MCZ - Museum of Comparative Zoology, Cambridge (USA)
NRMS - Naturhistoriska Riksmuseum, Stockholm
NMW - Naturhistorisches Museum, Wien
PMNH - Peabody Museum of Natural History, Yale University, New Haven
SMF - Forschungsinstitut Senckenberg, Frankfurt am Main
SMUK - Snow Museum, University of Kansas, Lawrence
UCD - University of California at Davis
USNM - United States National Museum of Natural History, Washington
VMNH - Virginia Museum of Natural History, Martinsville
ZMB - Zoologisches Museum der Humboldt-Universität, Berlin
ZMH - Zoologisches Museum, Hamburg
ZMUC - Zoologisk Museum, Universitet København
ZSBS - Zoologisches Sammlung des Bayerisches Staates, München

I have retained some abbreviations out of respect to decades of traditional usage although alternative codons have been proposed to reflect changes in institutional names. Thus I prefer "USNM" over "NMNH" and "BMNH" over "TNHM" (The Natural History Museum, London).

Abbreviations for cited type specimen categories:

HT - holotype
PT - paratype(s)
ST - syntype(s)
LT - lectotype
LPT - lectoparatype(s)
NT - neotype
NPT - neoparatype(s)

Abbreviations of political units

Co.: County
Dept.: Departamento
Mun.: Municipio
Prov.: Provincia
Est.: Estado
Par.: Parish

Acknowledgments

Any synthetic work of this scope and magnitude can hardly be considered the work of a single author: in a sense all of the scientists from whose publications it has been compiled can be regarded as co-authors. Also the curators of those collections containing relevant type material have contributed in providing access to the specimens, rare literature, and useful historical folklore. In less tangible but still important ways, colleagues have represented an ongoing source of information which has been assimilated over the years and integrated into the eventual product.

I have to acknowledge the invaluable aid rendered by several colleagues in particular: Bruno Condé, Henrik Enghoff, Sergei I. Golovatch, Jean-Paul Mauríes, Alessandro Minelli, Monique Nguyen Duy, William A. Shear, and Rowland M. Shelley, who read over parts of the manuscript or provided specific points of information as the work evolved. For help in locating obscure places in Mexico, Cuba, and Costa Rica, I am obligated to Julian Bueno Villegas, Antonio R. Perez-Asso, and Julian Monge-Najera, respectively.

H. F. Loomis, acknowledged doyen of Mesamerican diplopodology and esteemed friend for many decades, provided help even beyond his demise in 1976, by making me heir to his collection and library, as well as a card-index and manuscript update of the 1918 West Indian checklist. The documentation even included an extensive list of the errors that Mr. Loomis had discovered in the 1958 Chamberlin & Hoffman "Checklist."

While the general concept of such a checklist had been latent for many years, it was catalyzed into substance by staff members of the Environmental Protection Agency, United States Department of the Interior. Steven Schilling first broached the possibility of funding for the work. Later Barbara Lamborne was my liason with EPA.

Extensive aid in producing the camera-ready copy was provided by Susan C. Kirby and Christine Plaugher, both of Martinsville. Editorial support, advice, counsel, and direct help were provided by Rick L. Boland, formerly editor and colleague at the Virginia Museum of Natural History.

Historical Summary

The development of milliped classifications has been discussed in some detail in my "Classification of the Diplopoda" (1980), to which the interested reader is referred, and will not be considered here except to the extent that major changes are explained in a "Remarks:" heading under the taxa concerned. It may be noted that in several orders, really major changes have already occurred since 1980, while others have remained virtually untouched.

In a somewhat different context, a short historical survey of the literature may embody a certain amount of reader interest as well as bibliographic value.

The first complete list of North American millipeds was published in 1865 by the Philadelphian physician, algologist, and student of diverse arthropod taxa, Horatio C. Wood. Forty-one species, dispersed through six genera and five families in a single order, were treated in a careful descriptive monograph notable, among other things, for its woodcut illustrations of both male and female genitalia. Shortly afterward, this information was integrated, with refinements, into a comprehensive monographic treatment of all known New World species by Henri DeSaussure & Alois Humbert (1872), which really qualifies as the baseline work for the entire hemisphere. DeSaussure himself was the first myriapod specialist to collect in tropical America, preceeding by several decades the activities of Cook and Loomis in Central America and the West Indies.

Wood's immediate successor in the United States was Charles Harvey Bollman, who commenced a brief but productive scientific career while only 19 years of age and described a considerable number of American taxa prior to his untimely death in 1889. His posthumously published checklist of North American millipeds (1893) accounted for some 119 species, 29 genera, and six families, still included in the single order Diplopoda. Almost contemporaneously, the study of our fauna was taken up by O. F. Cook, at whose hand the classification of Diplopoda experienced an amazing escalation into modernity, although the actual number of North American species described by Cook was relatively modest. Within a decade, however, the description of Nearctic millipeds was commenced in earnest by R. V. Chamberlin, who published hundreds of nominal new species during the following half-century. Cook's protege H. F. Loomis, entered the field around the middle 1920s and also named many new species, genera, and some families, even though his primary interests lay with the millipeds of the West Indies and Middle America.

By 1950, the knowledge of the North American fauna was scattered through so many short, mostly descriptive papers (only Loomis had prepared several comprehensive family revisions), that only the most determined novice could hope to gain some command of the literature. In that year, Professor Chamberlin and I began preparation of a new North American checklist, which continued entirely through the mail until the end of 1955, when the manuscript was submitted to the United States National Museum for publication. After a long journey through the editorial process, this work appeared in September of 1958, accounting for 749 species and subspecies, 200 genera, and 36 families, encompassed in 12 orders. Roughly, these figures reflected virtually a **sevenfold** increase at all levels, from those admitted by Bollman in 1893.

Work on the taxonomy of North American millipeds since about 1950 has reflected the situation on a global basis, namely a shift away from the mindless description of new taxa with an absolute minimum of synthesis, into the revision of genera and small families using modern systematic principles, and the resolution of the numerous nomenclatorial pitfalls that infested the literature. Although the number of investigators entering this area has not been great, the volume of their careful work has in less than 40 years rendered both the 1958 and 1968 checklists totally obsolete (actually some parts were out of date even by the time they were published). A revised version, reflecting the major refinements and improvements made since 1955 has been a real desideratum for a long time.

Although some large families (e.g. Parajulidae, Rhinocricidae, Spirostreptidae) remain to be revised, the taxonomy of our fauna may be said to have progressed well into the "beta" level of refinement, with the way now prepared for aspiring students to learn both what has been securely established and what lacunae remain to be investigated. The information in the following pages is intended to provide a summary of and means of entry into the current stage of milliped systematics.

It is an interesting historical parallel that, just as descriptive activity with North American millipeds during the first half of this century was largely the domain of two workers only, the burden of post-1950 research has likewise been carried by two scientists. Reference is made to the solid contributions of William A. Shear, specializing on chordeumatidans, and the impressive monographs written by Rowland M. Shelley, who although partial to polydesmidans copes skillfully with taxa in other orders. Largely through the efforts of these two authorities, the systematics of American diplopods have been upgraded in just a few decades from the complete chaos of 1950 to a level of sophistication enjoyed by animals (such as most vertebrates) which have been investigated for much longer periods of time.

During the same period, of course, lesser contributions were made by several other investigators. The present writer contributed a variety of small generic revisions and a synopsis of the Atopetholidae before ceding the field to his colleagues and turning to tropical species. In a very short time period (1959-1966) William T. Keeton published a number of studies of American millipeds, chiefly xystodesmids and spirobolids, including an impressive, model revision of the family Spirobolidae. Nell B. Causey named a large number of species and genera during the period 1942-1975, but her work rarely transcended the purely descriptive, alpha-level stage. J. S. Buckett and M. R. Gardner commenced a highly promising research program in California during the 1960s and early 1970s which produced some useful revisionary studies; regrettably the initial momentum was not sustained beyond Gardner's impressive revision of the Caseyidae. Finally, both Chamberlin and Loomis continued to contribute short taxonomic papers well into the 1960s, although their primary interest was by then with tropical faunas.

Perhaps the most notable areas of progress in North America since 1958 have been the reduction of dozens of names to synonymy, vast improvement in knowledge of geographic ranges, and a quantum leap in the substance and overall quality of publications treating that milliped fauna. While new students will now find entry into the subject relatively easy, they will also have high standards to meet and uphold.

Knowledge of the Mesamerican fauna, largely initiated by H. DeSaussure in 1860 and fully documented by DeSaussure & Humbert in 1872, experienced a major advance in R. I. Pocock's volume on myriapods in the "Biologia Centrali-Americana" (1903-1910), which referenced all previously-known species as well as the descriptions of many new taxa, always with keys, illustrations, and thoughtful discussions. Pocock, like Cook, was endowed with an innate sense of taxonomic reality, and his work was a model of thorough, insightful investigation. He had earlier (1894) produced a summary of the known millipeds of the West Indies, which was "state of the art" for its time. Concurrently with the "Biologia," H. W. Brolemann (1900-1911) described a number of species from Costa Rica and Guatemala.

R. V. Chamberlin, when at the Museum of Comparative Zoology from 1910 to 1925, studied collections from several Neotropical areas, producing in 1918 a survey of the West Indian diplopods and in 1922, a similar treatment of the fauna of Central America. Both of these contributions were chiefly the vehicles for the description of many new taxa , but the author did include reference to all species known for the regions concerned. Regrettably Chamberlin did not provide illustrations with his 1918 paper (which guaranteed instant confusion and uncertainty), and although the novelties of 1922 were documented with good drawings, the way in which these had been oriented did not always provide the information needed by other specialists to recognize the essential characteristics, particularly of the polydesmidan species. In short, the work by Chamberlin introduced far more problems than progress, a pattern which was to persist for many decades to come in dozens of short papers describing a plethora of Mesamerican taxa. Generally, the burden of adequately documenting Chamberlinian names has fallen to his successors, and fortunately, his entire collection, including types, was deposited in the U. S. National Museum of Natural History and is available for study.

Distinctly more positive and useful contributions to Mesamerican millipeds were made by H. F. Loomis, beginning with his noteworthy treatments of the West Indian faunas (1934-1977) and subsequent attention to the species of Mexico, Costa Rica, and Panama. Loomis's work was careful and well-illustrated (although he never adopted the standard mesal aspect for drawing polydesmidan gonopods), and his monographs on the faunas of Hispaniola (1936) and Panama (1964) stand out as oases in a desert of chaotic short descriptive papers. His 1968 checklist of the Mesamerican species is beyond praise for its fundamental reference value, although 30 years of subsequent work have rendered it obsolete.

A complete survey of the millipeds of El Salvador was published by Otto Kraus in 1954, the many new taxa supported by excellent illustrations. Numerous new species and genera were named by Nell B. Causey during the years 1954-1973 from Mexican collections, chiefly from caves. The present writer also contributed a number of short papers relating to Mesamerican taxa. However, the most substantial publications of recent decades have been the series authored by Professor Shear (1974-1986) on millipeds collected in Central American caves. He has also monographed the entire family Cleidogonidae (1972) in an exemplary way.

Taxa excluded from the area coverage

As our knowledge of milliped taxonomy becomes increasingly refined, it is inevitable that a number of species (and higher categories) are found to have been erroneously included in previous lists. Most of these alien elements are the result either of misidentifications or mislabeling at some stage of preparation or study. "Loss" of taxa through synonymy is of course not considered in this context.

1. *Ergethus perditus* Chamberlin, 1949. Originally described from Edinburg, Texas as the sole member of a new family Ergethidae in the order Chordeumatida, this species was found to be actually a member of the Peruvian genus *Porcullosoma* (Paraxosomatidae). (Shear, 1971).

2. *Spirostreptus abstemius* Karsch, 1881, supposedly from "Kuba," proves to be mislabeled material referable to a South American genus (*Anethoporus*) not known to occur in the West Indies (Hoffman, 1996).

3. *Pycnotropis latzeli* Attems, 1931, the types of which were labeled "Panama," almost certainly is native to Peru or Ecuador.

4. *Rhinocricus haitophilus* Silvestri, 1897, thought to have come from Haiti, is obviously a species of *Salpidobolus* (**new combination**!), rather similar in gonopod characters to *S. repandus* (Attems, 1914), and is thus native to the Indonesian region.

5. *Polydesmus mexicanus* Lucas, 1840. This name appears to have been based upon a platyrhacid, probably of the genus *Barydesmus*, originating somewhere in South America.

6. *Polydesmus bilineatus* Lucas, 1840. The foregoing statement applies equally well to this name.

7. *Semionellus tertius* Chamberlin, 1948. This species, which was transferred into the genus *Aphelidesmus* by Chamberlin & Hoffman, 1958, was said to have come from Kerr Co., Texas. This genus, of course, occurs no further north than Costa Rica, and it seems likely that the type material of *tertius* actually came from Colombia or Ecuador (analogous to the case of *Ergethus perditus*).

8. *Polydesmus (Hormobrachium) racovitzai* Brolemann. This species, endemic to a local area in the Pyrennes Mountains, was recorded from Seattle, Washington, by Causey (1954: 82). In a recent review of anthropochoric polydesmids in western United States, Shelley (1996) has expressed the opinion that the material (not currently available) is actually misidentified, implying *P. inconstans* which is superficially similar in gonopod structure, or *P. angustus,* both now known from a number of sites in the Pacific Northwest.

9. *Rachis californicus* Daday, 1891, was based on a single male in the Hungarian Natural History Museum labeled "California," and for many decades was carried in various lists as a member of the family Rhacodesmidae. Although the specimen apparently no longer exists, the original description and drawing permit identification of the name as referable to the South American chelodesmid genus *Leptherpum* (Hoffman, 1992).

10. *Spirostreptus ventralis* von Porat, 1876. The type material of this species was labeled as from "S:t. Thomas" which Porat assumed to be the island in the West Indies. This precedent was followed by Pocock (1894) and all subsequent investigators who treated that fauna. However, Brolemann (1902) saw specimens that he thought were *ventralis* from Brazil, opening the possibility that the types might have been mislabeled or introduced into St. Thomas. The truth was anticipated by Jeekel (1971: 129) who used the Portuguese spelling "São Tomé" in connection with this species. My eventual study of the holotype at Stockholm in 1983 showed that *ventralis* is in fact a Brazilian *Gymnostreptus*, possibly native to the state of Natal (Hoffman, 1997: 72). No spirostreptids have been unimpeachably recorded from the Antillean St. Thomas.

11. *Stemmiulus bioculatus* Gervais, 1847, was recorded from Punta Sabana, near La Palma, Prov. Darien, Panama, by Silvestri, 1895. It seems very unlikely that Silvestri's material was conspecific with the female types of Gervais, from central Colombia.

12. *Chondrodesmus frauenfeldianus* (Humbert & DeSaussure, 1870). Silvestri's records (1895) of this species from several localities in western Darien cannot be taken seriously unless confirmed by actual comparison of his material with the original types.

13. *Oncodesmus granosus* (Gervais & Goudot). Recorded by Silvestri (1895) from Darien, but as noted by Pocock (1909) "The specimens from Panama referred by Silvestri to *O. granosus* may belong to a different species."

14. *Crypturodesmus targionii* Silvestri, 1897, was described from "Mexico" and carried without question in the Biologia (Pocock, 1909). Loomis (1968: 18) noted that in the separatum of the 1897 paper which he received from Silvestri, the word "Messico" in the title had been cancelled and replaced with "Brasile." This change is logical in view of the restriction of congeneric species to southern Brazil.

15. *Julus caesar* Karsch, 1881. The occurrence of julids in Puerto Rico has always seemed implausible, but the status of the two attributed to that island by Karsch was never investigated until 1999, when Henrik Enghoff examined the type material (ZMB) and advised me (*in litt.)* that *Julus caesar* is based upon an obviously mislabeled female specimen of *Pachyiulus hungaricus* (Karsch) or a closely related species.

16. *Julus curiosus* Karsch, 1881. Dr. Enghoff was able to establish that this name is based upon a female specimen (ZMB) of a *Cylindroiulus*, either *caeruleocinctus* (Wood) or a closely related species (*in litt.,* February 1999). Thanks to his interest in this problem, two of the last enigmatic names afflicting the Antillean milliped fauna have been removed from consideration.

Order Polyxenida Lucas

Family Lophoproctidae Silvestri

Lophoproctidae Silvestri, 1897, Ann. Mus. Civ. Stor. Nat. Genova, 38: 645.

Genus **Lophoproctinus** Silvestri

Lophoproctinus Silvestri, 1948, Boll. Lab. Ent. agr. Portici, 8: 217. Type species: *Lophoproctinus inferus* Silvestri, 1903, by original designation.

Lophoproctinus diversunguis Silvestri

Lophoproctinus diversunguis Silvestri, 1949, Boll. Lab. Ent. agr. Portici, 9: 3. Types (LEAP) from Orizaba, Veracruz, Mexico.

Lophoproctinus mexicanus Silvestri

Lophoproctinus mexicanus Silvestri, 1949, Boll. Lab. Ent. agr. Portici, 9: 1. Types (LEAP) from Jalapa (=Xalapa), Veracruz, Mexico.

Lophoproctinus notandus Silvestri

Lophoproctinus notandus Silvestri, 1949, Boll. Lab. Ent. agr. Portici, 9: 4. Types (LEAP) from San Francisco, Veracruz, Mexico.

Recorded also from Chipinque Mesa at Monterey, Nuevo León, Mexico (Loomis, 1966: 515); and probably occurs also in Texas.

Genus **Lophoturus** Brolemann

Lophoturus Brolemann, 1931, Archs Zool. exp. gén., 72: 304 (as subgenus of *Lophoproctus*). Type species: *Lophoproctus obscurus* Brolemann, by original designation. – Condé & Nguyen Duy-Jacquemin, 1977, Bull. Mus. Nat. Hist. Natur. (3A) 477: 909 (raised to generic rank).

Alloproctus Silvestri, 1948, Boll. Lab. Ent. agr. Portici, 8: 217. Type species: *Alloproctus guineensis* Silvestri, 1948, by original designation (preoccupied).

Alloproctinus Jeekel, 1963, Ent. Bericht., 23: 156. New name for *Alloproctus* Silvestri, with the same type species. Synonymized by Condé & Nguyen Duy-Jacquemine, 1977.

Lophoturus aequatus (Loomis)

Lophoproctus aequatus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 7, fig. 1. HT (USNM) from Petite Rivière de Artibonite, Haiti.

Lophoturus aequatus: Condé & Terver, 1965, Stud. Fauna Curaçao, 22: 127, figs. 96d-g, 97b, 98d-f, 99b (redescription from ♂ topoparatype) ; Condé, 1996, Mém. Mus. Nat. Hist. Natur., 169: 133, figs. 4a, b.

Range: Recorded also from Key Largo, Florida, by Condé (1996: 134).

Lophoturus anisorhabdus (Condé & Terver)

Alloproctinus anisorhabdus Condé & Terver, 1964, Stud. Fauna Suriname, 7: 19, figs. 3, 4. ♂ HT (Condè coll.), from Guatemala, without precise locality .

Lophoturus crassipes Condé & Terver

Lophoturus crassipes Condé & Terver, 1979, Rev. Ecol. Biol. Sol, 16: 145, figs. 6a-f. ♂ HT (MNHN) from Pic du Paradis, 420 m., Saint Martin, Lesser Antilles.

Lophoturus longisetis (Pocock)

Polyxenus longisetis Pocock, 1894, Journ. Linn. Soc. London, 24: 474, fig. 1. ST (BMNH) from Mustique Island, Lesser Antilles.

Lophoturus longisetis: Condé & Terver, 1979, Rev. Ecol. Biol. Sol., 16: 137. Designation and description of lectotype.

Range: Recorded also from Jamaica and St. Eustatius.

Lophoturus longisetis scopiger Condé & Terver

Lophoturus longisetis scopiger Condé & Terver, 1979, Rev. Ecol. Biol. Sol, 16: 143, figs. 5a-c. ♂ HT (MNHN) from La Désirade, Guadeloupe, Lesser Antilles.

Lophoturus madecassus (Marquet & Condé)

Alloproctus madecassus Marquet & Condé, 1950, Mém. Inst. Sci. Madagascar (A) 4: 114, figs. 1-6. HT (Condé coll.) from Tuléar, Madagascar.

Lophoturus madecassus: Nguyen Duy-Jacquemin & Condé, 1984, Bull. Mus. Nat. Hist. Natur., (4) 4: 722 (record for Tortugas Keys, Florida).

Range: Nearly circumtropical, recorded from Madagascar, Ivory Coast, Jamaica, Florida Keys, and the Tonga Islands, perhaps synanthropically dispersed.

Lophoturus niveus (Loomis)

Lophoproctus niveus Loomis, 1934, Smiths. Misc. Coll. 89(14): 5, fig. 1 . ♀ HT (USNM) from Beata island, Haiti .

Alloproctinus niveus: Condé & Terver, 1965, Stud. Fauna Curaçao, 22: 124, figs. 96a-c, 97a, 98a-c, 99a (redescription from topoparatype).

Lophoturus vicarius Condé & Terver

Lophoturus vicarius Condé & Terver, 1979, Rev. Ecol. Biol. Sol, 16: 147, figs. 7a-c. ♂ HT (MNHN) from Maria Galante, Guadeloupe, Lesser Antilles.

Genus **Plesioproctus** Condé

Plesioproctus Condè, 1964, Rev. Française Entom., 31: 62. Type species: *Lophoproctus comans* Loomis, 1934, by original designation.

Monotypic, with a circum-Caribbean distribution.

Plesioproctus comans (Loomis)

Lophoproctus comans Loomis, 1934, Smiths. Misc. Coll., 89(14): 4, pl. 1, fig. 1. ♀ HT (USNM) from Maracas Valley,Trinidad .

Plesioproctus comans: Condé, 1964, Rev. Française Entom., 31: 62, figs. 1a-d, 2a-f (redescription from holotype). – Terver, Terver, & Condé, 1968, Entomol. Meddel, 36: 191, figs. 1-7.

Range: Recorded from Reventazon, Prov.San Jose, Costa Rica, and Mona, St. Andrew Parish, Jamaica, as well as localities in Colombia and Venezuela.

Family **Polyxenidae** Lucas

Pollyxénites Lucas, 1840, Hist. Nat. Crust. Myriap., 518.

Pollyxenidae Gervais, 1847, Hist. Nat. Insectes Apt., 4: 47.

Genus **Polyxenus** Latreille

Polyxenus Latreille, 1802/1803 (the original form *Pollyxenus* has been construed as an incorrect original spelling by Opinion 905, 1970, of the ICZN). Type species: *Scolopendra lagura* Linnaeus, by monotypy. – Condé, 1996, Mém. Mus. natn. Hist. nat. 169: 127 (review of North American species).

About 10 nominal species, some of them species dubia, in the Northern Hemisphere, four occurring in North America.

Polyxenus fasciculatus (Say)

Polyxenus fasciculatus Say, 1821, Journ. Acad. Nat. Sci. Philadelphia, 2: 108. (neotype: MNHN) "Southern States" (Say); restricted by Condè (1996: 128) to St. Simon's Island, Glynn Co., Georgia.

Polyxenus fasciculatus variety *pallidus* Ryder, 1878, American Natur., 12: 558.

Range: As defined by Nguyen Duy-Jacquemine (1976: 114) and Condè (1996: 130), this species is known to occur-chiefly in the Coastal Plain - from Maryland to Texas, north to Illinois; also recorded from Bermuda and the Canary Islands.

Polyxenus lagurus (Linnaeus)

Scolopendra lagura Linnaeus, 1758, Syst. Natur., ed. 10, p. 637. Sweden; no type known to exist.

Pollyxenus lagurus: Latreille, 1804, Hist. Natur. Crust. Insect., p. 82.

Polyxenus lagurus: Latzel, 1884, Myr. Öster.-Ungarn. Monarch., 2: 74, pl. 3, figs. 22-34, pl. 4, figs. 35-39. – Condé, 1996, Mém. Mus. natn. Hist. nat., 169: 130.

Range: Widespread in western Europe, also in North America, where recorded from Massachusetts, New Jersey, New York, Michigan, Illinois, Montana, Washington, Colorado, and Arizona. Condé (1996: 130) suggests the possibility of a native Holarctic distribution rather than anthropochoric transatlantic dispersal.

Polyxenus pugetensis Kincaid

Polyxenus pugetensis Kincaid, 1898, Ent. News, 9: 192. "Western Washington" (Kincaid).– Condé, 1996, Mém. Mus. Nat. Hist. Natur., 169:130, fig. 2 (redescription from a "cotype" Condé coll.) from the University of Washington campus in Seattle, King Co., Washington).

Range: Condè (1996: 130) recorded material from the Olympic Peninsula, Mason Co., Washington, and from Benton County, Oregon. ?British Columbia

Polyxenus anacapensis Pierce

Polyxenus anacapensis Pierce, 1940, Bull. Southern California Acad. Sci., 39: 164, figs. 3, 6, 9, 15-18. Types (LACM) from Middle Anacapa Island, Santa Barbara Co., California.– Conde, 1996, Mém. Mus. Nat. Hist. Natur., 169: 132, fig. 3a-b (redescription from paratype).

Genus **Macroxenodes** Silvestri

Macroxenodes Silvestri, 1948: Boll. Lab. Ent. Agr. Portici, 8: 216. Type species: *Polyxenus meinerti* Silvestri, 1898, by original designation.

Four widely dispersed species, Brazil to Baja California.

Macroxenodes bartschi (Chamberlin)

Polyxenus bartschi Chamberlin, 1922, Ent. News, 33:165. "one of the Tortugas, Florida" , construed by Chamberlin & Hoffman (1958: 10) to be Tortugas Key, Monroe Co., Florida. Original type (?MCZ) apparently lost.

Macroxenodes bartschi: Nguyen Duy-Jacquemin & Condè, 1984: Bull. Mus. Nat. Hist. Natur., (4) 6: 722, figs. 1-17 (redescribed from neotype taken on Upper Snipe Key, Monroe Co., Florida).

Macroxenodes poecilus (Chamberlin),

Polyxenus poecilus Chamberlin, 1923: Bull. California Acad, Sci.,12: 400, figs. 25-29. ♂ HT (CAS) from Puerto Bellandra, Isla Santa Inez Sur, Baja California (state undetermined), México.

Macroxenodes poecilus: Condè & Nguyen Duy-Jacquemin, 1987, Rev. Ecol. Biol. Sol, 24: 103, figs. 14-19 (redescription of holotype).

POLYXENIDAE OF UNCERTAIN STATUS AND POSITION

Barroxenus panamanus Chamberlin, 1940, Bull. Univ. Utah, 30(9): 3. HT (USNM) from Barro Colorado Island, Canal Zone, Panama.

Polyxenus tuberculatus Pierce, 1940, Bull. Southern California Acad. Sci., 39: 166. Type material (?LACM) from Sabinal, Uvalde Co., Texas.

Polyxenus fasciculatus variety **victoriensis** Pierce, 1940, Bull. Southern California Acad. Sci., 39: 163. Type material (?LACM) from Victoria, Victoria Co., Texas. Treated as a subspecies by Chamberlin & Hoffman, 1958: 10, who would be considered as the authors of the taxon *victoriensis* (ICZN Rec. 50c, 1985). Redescription should precede formal alterations of the name.

Order Glomerida Leach

Family Glomeridae Leach

Glomerides [sic!] Leach, 1815, Trans. Linnean Soc. London, 11: 376.

Glomeridia Brandt, 1833, Bull. Soc. Imp. Nat. Moscow, 6: 194.

Glomeridae Newport, 1844, Ann. & Mag. Nat. Hist., 13: 93.

Glomerididae Cook, 1896,. Brandtia, p. 45.

Onomerididae Cook, 1896, Brandtia, p. 45.

Genus **Glomeroides** Chamberlin

Glomeroides Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 60. Type species: *Glomeroides centralis* Chamberlin, by original designation.

Sonoromeris Silvestri, 1929, Boll. Lab. zool. Portici. 22: 199 (as subgenus of *Apiomeris*). Type species: *A. (S.) prima* Silvestri, by original designation. Synonymized with *Glomeroides* by Shear (1986).

16 species, Mexico and Guatemala; one, California.

Glomeroides addititus Causey

Glomeroides addititus Causey, 1973, Bull. Assn. Mexican Cave Stud. 5: 107, figs. 1, 2. ♂ HT (USNM) from Cueva de Ungurria, 20 km WSW Tezonapa, Veracruz, Mexico.

Glomeroides boneti (Chamberlin)

Glomeris boneti (Chamberlin) 1943, Bull. Univ. Utah, 34(7): 69, fig. 171. ♂ HT (USNM) from Parque Nacional de Zempoala, Morelos, Mexico.

Glomeroides boneti: Shear, 1986, Texas Mem. Mus. Speleol. Monogr., 1: 65.

Glomeroides caecus Causey

Glomeroides caecus Causey, 1964, Proc. Louisiana Acad. Sci., 27: 65, figs. 1-5. HT (MCZ?) from Sótano de Huitzmolotitla, northeast of Xilitla, San Luis Potosí, Mexico.

Glomeroides centralis Chamberlin

Glomeroides centralis Chamberlin, 1922, Proc. U. S. Nat. Mus. 60(8): 60, pl. 24, figs. 5-8, pl. 25, figs. 1-4. ♂♀ syntypes (USNM) from Finca Treceaguas, five km southeast of Senahú, Dept. Alta Verapaz, Guatemala.

Glomeroides chiapensis Shear

Glomeroides chiapensis Shear, 1986, Texas Mem. Mus. Speleol. Monogr. 1: 70. ♂ HT (AMNH) from Yochib, Chiapas, Mexico.

Glomeroides comitan Shear

Glomeroides comitan Shear, 1986, Texas Mem. Mus. Speleol. Monogr. 1: 67, figs. 4, 11. ♂ HT (AMNH) from Cueva de las Florecillas, San Francisco, Comitán, Chiapas, Mexico.

Glomeroides cooki Shear

Glomeroides cooki Shear, 1986, Texas Mem. Mus. Speleol. Monogr. 1: 70, figs. 7, 12. ♂ HT (AMNH) from "Hoyas de Santa Mariá, Mexico", the location of which has not been established but which is probably in Chiapas.

Glomeroides grubbsi Shear

Glomeroides grubbsi Shear, 1982, Assoc. Mexican Cave Stud. Bull. 8: 147, figs. 6-9. ♂ HT (AMNH) from Cueva de Tasalolpan, five km SW Cuetzalan, Puebla, Mexico. Recorded from two other caves in Puebla.

Glomeroides maculatus Shear

Glomeroides maculatus Shear, 1986, Texas Mem. Mus. Speleol. Monogr. 1: 69, figs. 3, 13. ♂ HT (USNM) from "Purula" [=Purulhá], Dept. Baja Verapaz, Guatemala.

Glomeroides orator Shear

Glomeroides orator Shear, 1986, Texas Mem. Mus. Speleol. Monogr., 1: 71, figs. 6, 10. ♂ HT (USNM) from "?Gobules Pass," Guatemala. The label with the type material is partly illegible and the name here given is one possibility noted by Shear, although no such place name can be located in Guatemala. Until another sample of material collected by Cook with a more legible rendition is found, we remain ignorant of the actual type locality.

Glomeroides patei Shear

Glomeroides patei Shear, 1982, Assoc. Mexican Cave Stud. Bull. 8: 147, figs. 1-5. ♂ HT (AMNH) from Sótano de las Calenturas, Yerbabuena, Tamaulipas, Mexico. Recorded from six other caves in Tamaulipas and Nuevo Leon by Shear (1986).

Glomeroides pecki Shear

Glomeroides pecki Shear, 1986, Texas Mem. Mus. Speleol. Monogr. 1: 71, fig. 15. ♂ HT (AMNH) from 32 miles S of Valle Nacional, Oaxaca, Mexico.

Glomeroides pellucidus Shear

Glomeroides pellucidus Shear, 1973, Acc. Naz. Lincei, 171: 248, figs. 5-8. ♂ HT (MCZ) from Cueva del Ojo de Agua Grande, Paraje Nueva, Cordoba, Veracruz, Mexico.

Glomeroides primus (Silvestri)

Apiomeris (Sonoromeris) prima Silvestri, 1929, Boll. Lab. Zool. Portici, 22: 200, figs. I: 1-12, II: 1-5 ♂ ♀ ST (LEAP) from Mill Valley, Marin Co., California.

Glomeroides primus: Shear, 1986, Texas Mem. Mus. Speleol. Monogr. 1: 71. Record for Monterey Co., California.

Glomeroides promiscus Causey

Glomeroides promiscus Causey, 1964, Proc. Louisiana Acad. Sci., 27: 65, figs. 6-8. ♂ HT (MCZ) from Sótano de Gómez Farías, Tamaulipas, Mexico.

Glomeroides sabinus Shear

Glomeroides sabinus Shear, 1986, Texas Mem. Mus. Speleol. Monogr. 1: 67. ♂ HT (AMNH) from Cueva del Sabín, Rancho El Sabín, Ocozocoautla, Chiapas, Mexico.

Glomeroides seamay Shear

Glomeroides seamay Shear, 1986, Texas Mem. Mus. Speleol. Monogr. 1: 65, fig. 8. ♀ HT (USNM) from Seamay, three km south of Senahú, Dept. Alta Verapaz, Guatemala.

Genus **Onomeris** Cook

Onomeris Cook, 1896, Brandtia, 10: 43. Type species: *O. underwoodi* Cook, by original designation.

Two, possibly three, species are named, there are others undescribed; southeastern United States.

Onomeris australora Hoffman

Onomeris australora Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., 66: 13, figs. 1, 2. ♂ HT (USNM) from Reed Creek Falls, Glade Mountain, near Satolah, Rabun Co., Georgia.

Range: Western North Carolina, northern Georgia.

Onomeris underwoodi Cook

Onomeris underwoodi Cook, 1896, Brandtia 10: 43. ♂ ♀ ST (USNM) from Auburn, Lee Co., Alabama.

Range: Southeastern United States, from South Carolina to Mississippi, north to Kentucky.

Genus **Trichomeris** Loomis

Trichomeris Loomis, 1943, Bull. Mus. Comp. Zool. 92: 374. Type species: *T. sinuata* Loomis, by original designation.

This monotypic genus is probably not separable from *Onomeris.*

Trichomeris sinuata Loomis

Trichomeris sinuata Loomis,1943, Bull. Mus. Comp. Zool., 92: 374, figs. 1a-f. ♂ HT (MCZ) from Monte Sano State Park, six miles southeast of Huntsville, Madison Co., Alabama.

Order Glomeridesmida Latzel

Family Glomeridesmidae Latzel

Glomeridesmidae Latzel, 1884, Myr. Öster.-Ung. Monar.2: 124.

Zephroniodesmidae Cook, 1895, Ann. New York Acad. Sci. 9: 5.

Genus **Glomeridesmus** Gervais

Glomeridesmus Gervais, 1844, Ann. Soc. ent. France, (2) 2: xxvii. Type species: *G. porcellus* Gervais & Goudot, by monotypy.

About 25 species, West Indies; Ecuador north to southern Mexico; southern India, Sri Lanka, Sumatra, Java, New Guinea, New Ireland.

Glomeridesmus adjuntas Chamberlin

Glomeridesmus adjuntas Chamberlin, 1950, Proc. Biol. Soc. Washington, 63: 147. ?HT (USNM) from Adjuntas, Puerto Rico.

Glomeridesmus albiceps Loomis

Glomeridesmus albiceps Loomis, 1975, Florida Entom., 58:168, figs. 1, 2. ♂ HT (FSCA) from Mount Diablo, St. Ann Parish, Jamaica.

Range: Also recorded from Trelawney and St. Thomas parishes, Jamaica.

Glomeridesmus angulosus Loomis

Glomeridesmus angulosus Loomis, 1948, Journ. Washington Acad. Sci., 38: 185, figs. 1, 2. ♂ HT (USNM) from Moneague, St. Ann Parish, Jamaica.

Glomeridesmus barricolens Chamberlin

Glomeridesmus barricolens Chamberlin, 1940, Bull. Univ. Utah, 30(9): 4. HT /?ST (USNM) from Barro Colorado Island, Canal Zone, Panamá.

Glomeridesmus bicolor Loomis

Glomeridesmus bicolor Loomis, 1964, Fieldiana: Zool., 47: 11, fig. 1. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panamá.

Glomeridesmus centralis Chamberlin

Glomeridesmus centralis Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 61, pl. 25, figs. 5, 6. ♀ HT (USNM) from Finca Actelá, above La Tinta, Dept. Alta Verapaz, Guatemala.

Glomeridesmus circularis Loomis

Glomeridesmus circularis Loomis, 1964, Fieldiana: Zool., 47: 12, figs.1B-F. ♂ HT (FMNH) from Finca Lerida, near Boquete, Prov. Chiriquí, Panamá.

Range: Also recorded from Almirante, Prov. Bocas del Toro, Panamá.

Glomeridesmus concolor Chamberlin

Glomeridesmus concolor Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 172. HT (MCZ) from Jacmel, Haiti.

Glomeridesmus grenadanus Chamberlin

Glomeridesmus grenadanus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 171. ♀ HT (MCZ) from Grand Étang, Grenada.

Glomeridesmus jenkinsi Loomis

Glomeridesmus jenkinsi Loomis, 1936, Bull. Mus. Comp. Zool. 80: 10, fig. 2a-c. ♂ HT (MCZ) from LeBorgne, Haiti.

Glomeridesmus latus Loomis

Glomeridesmus latus Loomis, 1961, Proc. U. S. Nat. Mus., 113: 78, figs. 1a-c. ♂ HT (USNM) from Cerro Campana, Prov. Panama, Panamá.

Glomeridesmus marmoreus Pocock

Glomeridesmus marmoreus Pocock, 1894, Journ. Linnean Soc. London, 24: 476, pl. 37, figs. 2-a-m. ST (BMNH) from St. Vincent (several localities, it is not known whether a holotype was designated).

Glomeridesmus parvior Chamberlin

Glomeridesmus parvior Chamberlin, 1940, Bull. Univ. Utah, 30(9): 4. HT/?ST (USNM) from Barro Colorado Island, Canal Zone, Panama.

Glomeridesmus pectinatus Loomis

Glomeridesmus pectinatus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 18, fig. 1. ♂ HT (MCZ) from "El Yunque," 7 km west of Fajardo, Puerto Rico.

Glomeridesmus riveroi Chamberlin

Glomeridesmus riveroi Chamberlin, 1950, Proc. Biol. Soc. Washington, 63: 147. HT/?ST (USNM) from Toro Negro, north of Villalba, Puerto Rico.

Glomeridesmus rotundatus Loomis

Glomeridesmus rotundatus Loomis, 1964, Fieldiana: Zool., 47: 13, figs. 1G-H. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panama.

Glomeridesmus sbordoni Shear

Glomeridesmus sbordoni Shear, 1973, Accad. Naz. Lincei, Prob. Att. Sci. Cult. 171: 246, figs. 1-4. HT (MCZ) from Grutas de Cocona at Teapa, Tabasco, Mexico.

Order Stemmiulida Pocock

Family Stemmiulidae Pocock

Stemmiulidae Pocock, 1894, Journ. Linnean Soc. London, 24: 477. – Silvestri, 1916, Boll. Lab. zool. Portici, 10: 287 et seq.(revision of family).

Four genera, northern South America, Central America, West Indies, tropical Africa, India, Sri Lanka, New Guinea.

Genus **Prostemmiulus** Silvestri

Prostemmiulus Silvestri, 1916, Boll. Lab. zool. Portici, 10: 313. Type species: *P. mexicanus* Silvestri, by original designation.

About 42 species, West Indies, Central America south of Vera Cruz; northern South America.

Prostemmiulus abditus Loomis

Prostemmiulus abditus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 18, figs. 5a-c. ♂ HT (USNM) from Morne Pilboreau, above Ennery, Haiti.

Prostemmiulus affinis Loomis

Prostemmiulus affinis Loomis, 1936, Bull. Mus. Comp. Zool., 80: 28, figs. 11a-b. ♂ HT (USNM) from site between Petit Goave and Leogoane, Haiti.

Prostemmiulus alveatus Loomis

Prostemmiulus alveatus Loomis, 1937, Bull. Mus. Comp. Zool., 80: 216, figs. 3, 4. ♂ HT (MCZ) from Soledad, Prov. Cienfuegos, Cuba.

Prostemmiulus annulatus Loomis

Prostemmiulus annulatus Loomis, 1964, Fieldiana: Zool., 47: 106, figs. 11A-D. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panamá.

Prostemmiulus atypus Chamberlin

Prostemmiulus atypus Chamberlin, 1952, Great Basin Nat., 12: 15. ♀ HT (FMNH) from "Escobas, opposite Point Barrios, Guatemala." Presumably Puerto Barrios, Dept. Izabal, is intended.

Prostemmiulus baliolus Loomis

Prostemmiulus baliolus Loomis, 1938, Bull. Mus. Comp. Zool., 82: 430, figs 2a-b. ♂ HT (MCZ) from site at 3000-4000 ft. in mountains above Imias, Prov.Guantanamo, Cuba.

Prostemmiulus cincinnatus Loomis

Prostemmiulus cincinnatus Loomis, 1964, Fieldiana: Zool., 47: 108, figs. 11E-F. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panamá.

Prostemmiulus clarus Chamberlin

Prostemmiulus clarus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 176. HT (MCZ) from Jacmel, Haiti.

Prostemmiulus clarus: Loomis, 1936, Bull. Mus. Comp. Zool. 80: 17, fig. 4. Illustration of gonopod.

Prostemmiulus clavipes Loomis

Prostemmiulus clavipes Loomis, 1936, Bull. Mus. Comp. Zool., 80: 26, fig. 10. ♂ HT (USNM) from vicinity of Trouin, Haiti.

Prostemmiulus cognatus Loomis

Prostemmiulus cognatus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 25, figs. 9a-b. ♂ HT (USNM) from vicinity of Trouin, Haiti.

Prostemmiulus compressus (Karsch)

Stemmijulus compressus Karsch, 1881, Zeitschr. Naturw., 54: 11. ♀ HT (ZMB) from "Porto Rico" without further indication.

Stemmiulus compressus: Pocock, 1894, Journ. Linn. Soc. London, 24: 478. Name only.

Not *Diopsiulus compressus* Silvestri, 1908, Bull. American Mus. Nat. Hist., 24: 566, fig. II, 1-8. The differences in size and segment number make it almost certain that Silvestri's material was not conspecific with the holotype. Only examination of the cyphopods of the latter can associate the name *compressus* with any particular species of this genus on Puerto Rico. The same constraint applies to the usages by Chamberlin in 1922, 1950, and 1952.

Prostemmiulus cooki Chamberlin

Prostemmiulus cooki Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 11, pl. 5, figs. 5-12. ♂ HT (USNM) from Joyabaj, Dept. Quiche, Guatemala.

Prostemmiulus cubae Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 176. ♂ HT (MCZ) from Guantanamo, Prov. Guantanamo, Cuba.

Prostemmiulus gracilipes Loomis

Prostemmiulus gracilipes Loomis, 1941, Bull. Mus. Comp. Zool., 88: 26, figs. 6a-d. ♂ HT (MCZ) from rain forest at 6000 ft., near Valle Nuevo, Republica Dominicana.

Prostemmiulus grandis Loomis

Prostemmiulus grandis Loomis, 1972, Florida Entom., 55: 202, figs. 26-29. ♂ HT (USNM) from Cairo, Prov. Limón, Costa Rica.

Prostemmiulus heatwolei Velez

Prostemmiulus heatwolei Velez, 1967, Caribbean Journ. Sci., 7: 32, figs. 18, 19. ♂ HT (USNM) from Km 6.2 on Hy. 186, Rio Grande, Puerto Rico.

Prostemmiulus interruptus Loomis

Prostemmiulus interruptus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 24, figs. 8a-b. ♂ HT (MCZ) from La Vestite, 6000-7000 ft., La Selle Range, Haiti.

Prostemmiulus iuloides Loomis

Prostemmiulus iuloides Loomis, 1941, Bull. Mus. Comp. Zool., 88: 22, figs. 4a-b. ♂ HT (MCZ) from Pico del Yaque, 8000-10,000 ft., Loma Rucilla, Cordillera Central, Republica Dominicana.

Prostemmiulus leucus (Chamberlin)

Stemmiulus leucus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 33. ♀ HT (USNM) from Atoyac, Veracruz, Mexico.

Prostemmiulus leucus: Loomis, 1966, Bull. U. S. Nat. Mus., 266: 71.

Prostemmiulus lombardiae Chamberlin

Prostemmiulus lombardiae Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 10, pl. 5, figs. 1-4. ♂ HT (USNM) from Lombardia, Honduras.

Prostemmiulus loomisi Mauriès

Prostemmiulus loomisi Mauriès, 1979, Bull. Mus. Nat. Hist. Nat., 4(A) 1: 631, figs.14-22. ♂ HT (FMNH) from Finca La Selva, Prov. Heredia, Costa Rica.

Prostemmiulus mexicanus Silvestri

Prostemmiulus mexicanus Silvestri, Boll. Lab. Zool. Portici, 10: 323, fig. 32, 1-12. HT (?ST) (LEAP) from La Buena Ventura, Santa Rosa, Veracruz, Mexico.

Prostemmiulus modicus modicus Silvestri, **stat. nov**.

Prostemmiulus modicus Silvestri, 1916, Boll. Lab. Zool. Portici, 10: 324, figs. 33, 1-14. HT/ST (LEAP) from Jalapa, Veracruz, Mexico.

Prostemmiulus modicus cordovanus Silvestri, **stat. nov.**

Prostemmiulus modicus var. *cordovana* Silvestri, 1916, Boll. Lab. Zool. Portici, 10: 326, fig. 33, 15-18. HT/ST (LEAP), from Cordoba, Veracruz, Mexico.

Prostemmiulus nesides Chamberlin

Prostemmiulus nesides Chamberlin, 1922, Proc. U. S. Nat. Mus. 61(10): 2 pl. 1, figs. 1-3. ♀ HT (MCZ) from Bibijagua, Isla de Pinos [now Isla de Juventud], Cuba.

Prostemmiulus obscurus Chamberlin

Prostemmiulus obscurus Chamberlin, 1952, Great Basin Nat., 12: 16. ♀ HT (FMNH) from Kenscoff, 4500 ft., Haiti.

Prostemmiulus oculeus Loomis

Prostemmiulus oculeus Loomis, 1961, Proc. U. S. Nat. Mus., 113: 109, figs. 6c-e. HT (USNM) from El Valle, Prov. Cocle, Panamá.

Prostemmiulus picadoi Silvestri

Prostemmiulus picadoi Silvestri, 1916, Boll. Lab. Zool. Portici, 10: 327, figs. 35, 1-4. ♀ HT/ST (LEAP) from "La Estrella" (82.55W, 9.45N), Prov. Limón, Costa Rica.

Prostemmiulus quadristriatus Loomis

Prostemmiulus quadristriatus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 22, figs. 7a-c. ♂ HT (USNM) from Morne Pilboreau, above Ennery, Haiti.

Prostemmiulus quintarius Loomis

Prostemmiulus quintarius Loomis, 1941, Bull. Mus. Comp. Zool., 88: 21, figs. 3a-c. ♂ HT (MCZ) from Maricao Forest at 2500 ft., Puerto Rico.

Prostemmiulus relictus Chamberlin

Prostemmiulus relictus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 9, pl. 4, figs. 3-12. HT (USNM) from La Ceiba, Dept. Atlantida, Honduras.

Prostemmiulus robustus Chamberlin

Prostemmiulus robustus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62(5): 177. HT (MCZ) from Belona, Prov. Oriente, Cuba.

Prostemmiulus scaurus Loomis

Prostemmiulus scaurus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 24, figs. 5a-d. ♂ HT (MCZ) from Valle Nuevo, 7000 ft., southeast of Constanza, Republica Dominicana.

Prostemmiulus setosus Loomis

Prostemmiulus setosus Loomis, 1941, Bull. Mus. Comp. Zool. 88: 31. ♀ HT (MCZ) from Valle Nuevo, 7000 ft., southeast of Constanza, Republica Dominicana.

Prostemmiulus strigatus Loomis

Prostemmiulus strigatus Loomis, 1938, Bull. Mus. Comp. Zool., 82: 432, figs. 3a-b. ♂ HT (MCZ) from Sierra de Cobre, Prov. Oriente, Cuba.

Prostemmiulus subulatus Loomis

Prostemmiulus subulatus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 20, figs. 6a-b. ♂ HT (MCZ) from Morne Brigand near Bayeux, Haiti.

Prostemmiulus sulcatus Loomis

Prostemmiulus sulcatus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 30, figs. 8a-b. ♂ HT (MCZ) from Monte Quita Espuela, 1000-3000 ft., Republica Dominicana.

Prostemmiulus sulfurariae Mauriés, **stat. nov.**

Prostemmiulus wheeleri sulfurariae Mauriés, 1980, Bull. Mus. Nat. Hist. Natur., A(4) 2: 1083, figs. 31-38. HT (MNHN) from Matuoba, Basse-Terre, Guadeloupe.

Although unquestionably a close relative of *wheeleri*, this taxon is certainly genetically isolated by open sea, and until nominate *wheeleri* from Culebra has been redescribed (Silvestri's illustrations of the genitalia are distinctly schematic!) for a precise comparison, full specific status seems justified for *sulfurariae*.

Prostemmiulus tenebrosus Loomis

Prostemmiulus tenebrosus Loomis, 1938, Bull. Mus. Comp. Zool., 82: 429, figs. 1a-b. ♀ HT (MCZ) from Pico Turquino, 5000 ft., Prov. Granma-Santiago de Cuba, Cuba.

Prostemmiulus teres Loomis

Prostemmiulus teres Loomis, 1964, Fieldiana: Zoology, 47: 109, figs. 11 G-K. ♂ HT (FMNH) from west of Finca Palo Santo, near Nueva California, Prov. Chiriqui, Panamá.

Prostemmiulus tridigitatus Loomis

Prostemmiulus tridigitatus Loomis, 1941, Bull. Mus. Comp. Zool. 88: 28, figs. 7a-b. ♂ HT (MCZ) from Monte Quita Espuela, 1000-3000 ft., Republica Dominicana.

Range: Also reported by Loomis (op. cit.) from Monte Diego de Ocampo, Cordillera Setentrional, Republica Dominicana.

Prostemmiulus tristani Silvestri

Prostemmiulus tristani Silvestri, 1916, Boll. Lab. Zool. Portici, 10: 326, figs. 34, 1-14. HT/ST? (LEAP) from "La Estrella" (82.55W, 9.45N), Prov. Limón, Costa Rica.

Prostemmiulus vallaris Loomis

Prostemmiulus vallaris Loomis, 1964, Fieldiana: Zool., 47: 109, figs. 11, L-N. ♂ HT (FMNH) from trail to Las Minas, 2400 ft., El Valle, Prov. Cocle, Panamá.

Prostemmiulus venustus Loomis

Prostemmiulus venustus Loomis, Bull. Mus. Comp. Zool., 80: 16. ♀ HT (MCZ) from Morne Pilboreau near Bayeux, Haiti.

Prostemmiulus wheeleri (Silvestri)

Diopsiulus wheeleri Silvestri, 1908, Bull. American Mus. Nat. Hist., 24: 508, figs. III, 1-8. HT/ST? (AMNH) from Isla de Culebra, Puerto Rico.

Prostemmiulus wheeleri: Silvestri, 1916, Boll. Lab. Zool. Portici, 10: 345.

Range: Puerto Rico, Virgin Islands.

Prostemmiulus xenops Loomis

Prostemmiulus heterops Loomis, 1936, Bull. Mus. Comp. Zool., 80: 29, figs. 12a-b. ♂ HT (USNM) from Petionville, Haiti. Preoccupied by *Prostemmiulus heterops* Chamberlin, 1923 .

Prostemmiulus xenops Loomis, 1950, Journ. Washington Acad. Sci., 40: 164.

Genus **Scoliogmus** Loomis

Scoliogmus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 33. Type species: *S. teres* Loomis, by original designation and monotypy.

One species, Puerto Rico.

Scoliogmus teres Loomis, 1941, Bull. Mus. Comp. Zool., 88: 33, figs. 9a-j. ♂ HT (MCZ) from Maricao Forest, Puerto Rico.

Genus **Stemmiulus** Gervais

Stemmiulus Gervais, 1844, in: Gervais & Goudot, Ann. Soc. ent. France (2)2: xxviii. Type species: *Iulus bioculatus* Gervais & Goudot, 1844, by monotypy.

Stemmatoiulus Cook, 1895, Amer. Nat., 29: 1111. Invalid substitute name for *Stemmiulus* Gervais. – Carl, 1914, Mem. Soc. neuchâtel. Sci. nat., 5: 830.

Stemmiulus: Silvestri, 1916, Boll. Lab. Zool. Portici, 10: 314 (synopsis).

About 25 species, Panama to Ecuador and Brazil.

Stemmiulus canalis Chamberlin

Stemmiulus canalis Chamberlin, 1940, Bull. Univ. Utah, 30(9): 14. HT (USNM) from Barro Colorado Island, Canal Zone, Panamá.

Stemmiulus marginandus Loomis

Stemmiulus marginandus Loomis, 1964, Fieldiana: Zool., 47: 111, figs. 11, O-R. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panamá.

Stemmiulus parallelus Loomis

Stemmiulus parallelus Loomis, 1964, Fieldiana: Zool., 47: 111, figs. 11, S-U. ♂ HT (FMNH) from west of Finca Palo Santo, near Nuevo California, Prov. Chiriqui, Panamá.

Stemmiulus unicus Loomis

Stemmiulus unicus Loomis, 1972, Florida Entom., 55: 203, figs. 30-33. ♂ HT (USNM) from Cairo, Prov. Limón, Costa Rica.

Order Polyzoniida Gervais

Family Hirudisomatidae Silvestri

Hirudisomini Silvestri, 1896, Ann. Mus. Civ. Stor. Nat. Genova, 36: 155.

Hirudisomidae Verhoeff, 1937, Ann. South African Mus., 32: 127.

Hirudisomatidae Hoffman, 1980, Classification of the Diplopoda, p. 73. – Shelley, 1996, Brimleyana, 23: 103 et seq. (revision of Nearctic fauna).

Heterozonini Verhoeff, 1901, Arch. Naturgesch. 67: 253.

Eight nominal genera, Eurasia, Japan, North America, Mexico.

Genus **Mexiconium** Shelley

Mexiconium Shelley, 1996, Brimleyana, 23: 134. Type species: *Mexiconium absidatum* Shelley, by original designation.

One species, Veracruz.

Mexiconium absidatum Shelley

Mexiconium absidatum Shelley, 1996, Brimleyana, 23: 135, figs. 4, 31-38. ♂ HT (VMNH) from north side of Cofre de Perote, 13.3 mi (21.8 km) S La Vigas, Tembladera, Veracruz, Mexico.

Genus **Octoglena** Wood

Octoglena Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 186. Type species: *Octoglena bivirgata* Wood, by monotypy. – Shelley, 1996, Brimleyana, 23: 108 (revision of genus).

Hypozonium Cook, 1904, Harriman Alaska Exped., 8: 62. Type species: *H. anurum* Cook, by monotypy. Synonymized by Shelley, 1996.

Euzonium Chamberlin 1950, Chicago Acad. Sci. Nat. Hist. Misc. 68: 1. Type species: *E. crucis* Chamberlin, by original designation). Synonymized by Shelley, 1996.

Four species, British Columbia to California; one, southern Appalachians (I am not convinced that the latter is congeneric with the West Coast taxa).

Octoglena anura (Cook)

Hypozonium anurum (Cook) 1904: Harriman Alaska Exped., 8: 63, pl. 5, figs 1a-d. HT (formerly USNM, now lost) from Seattle, King Co., Washington.

Octoglena anura: Shelley, 1996, Brimleyana, 23: 119, figs. 12-15. Neotypes (FSCA) from Saltwater State Park, 18 mi (29 km) S of Seattle, Washington.

Range: British Columbia to central western Oregon (Shelley 1996, map 28).

Octoglena bivirgata Wood

Octoglena bivirgata Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 186. Type material presumed lost from ANSP, TL erroneously suggested to be "mountains of Georgia" by Wood.

Euzonium crucis Chamberlin, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 68: 1. HT (?sex) (?USNM) from Felton, Santa Cruz Co., California. Synonymized by Shelley, 1996.

Hypozonium arnaudi Chamberlin, 1954, Proc. Biol. Soc. Washington, 67: 233. ♀ HT (USNM) from Felton, Santa Cruz Co., California. Synonymized by Shelley, 1996.

Range: Curry Co., Oregon south to Santa Cruz Co., California (Shelley 1996, map 28).

There is a real possibility that the missing holotype of *Euzonium crucis* is the holotype of *Hypozonium arnaudi*, as the result of a Chamberlinian amnesticism.

Octoglena gracilipes (Loomis)

Polyzonium gracilipes Loomis, 1971, Florida Entom., 54: 157, figs. 18-23. ♂ HT (USNM) from Cloudland Canyon State Park, Dade Co., Georgia.

Octoglena gracilipes: Shelley, 1996, Brimleyana, 23: 129, figs. 22-27.

Range: Northern Alabama and Georgia, western South and North Carolina, eastern Tennessee (map, Shelley, 1996, fig. 29).

Octoglena prolata Shelley

Octoglena prolata Shelley, 1996, Brimleyana, 23: 125, figs. 16-18. ♂ HT (USNM) from Canyonville, Douglas Co., Oregon.

Range: Douglas, Jackson, and Josephine counties, southwestern Oregon (Shelley, 1996, map 28).

Octoglena sierra Shelley

Octoglena sierra Shelley, 1996, Brimleyana, 23: 127, figs. 19-21. ♂ HT (VMNH) from 4 mi W Newcastle, Placer Co., California.

Range: foothills of the Sierra Nevada, Placer Co., California (Shelley, 1996, map 28).

Family Polyzoniidae Newport

Polyzonidae Newport, 1844, Proc. Linnean Soc. London, 1: 195.

Polyzoniidae Cook, 1895, Ann. New York Acad. Sci., 9:5. – Verhoeff, 1937, Ann. South African Mus., 32: 127 (first use of family exclusive of Hirudisomatidae). – Shelley, 1998,Arthropoda Selecta, 6: 6 et seq. (revision of family).

Two subfamilies, Eurasia, North America.

Subfamily Buzoniinae Shelley

Buzoniinae Shelley, 1998, Arthropoda Selecta, 6: 7.

Two tribes, three genera, western North America.

Tribe Buzoniini Shelley

Buzoniini Shelley, 1998, Arthropoda Selecta, 6: 7.

Genus **Buzonium** Cook & Loomis

Buzonium Cook & Loomis, 1928, Proc. U. S. Nat. Mus., 72(18): 13. Type species: *B. crassipes* Cook & Loomis, by original designation.

Pizonium Chamberlin, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 68: 2. Type species: *P. crescentis* Chamberlin, by original designation. Synonymized by Shelley, 1998.

One species, California and Oregon.

Buzonium crassipes Cook & Loomis

Buzonium crassipes Cook & Loomis, 1928, Proc. U. S. Nat. Mus., 72(18): 14, figs. 2a-d. ♂ HT (USNM) from Seneca, Plumas Co., California.

Pizonium crescentis Chamberlin, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 68: 2. HT (USNM) from 15 miles east of Crescent City, Del Norte Co., California. Synonymized by Shelley, 1998.

Range: Coast ranges and Sierra Nevada, southwestern Oregon south to level of San Francisco, California (map, Shelley, 1998, fig. 26)

Tribe Bdellozoniini Shelley

Bdellozoniini Shelley, 1998, Arthropoda Selecta, 6: 9.

Two genera, western United States.

Genus **Bdellozonium** Cook & Loomis

Bdellozonium Cook & Loomis, 1928, Proc. U. S. Nat. Mus., 72(18): 15. Type species: *B. cerviculatum* Cook & Loomis, by original designation. – Shelley, 1998, Arthropoda Selecta, 6: 9.

Calzonium Chamberlin, 1954, Proc. Biol. Soc. Washington, 67: 232. Type species: *C. quicki* Chamberlin, by original designation. Synonymized by Shelley, 1998.

Two species, Oregon, California.

Bdellozonium cerviculatum Cook & Loomis

Bdellozonium cerviculatum Cook & Loomis, 1928, Proc. U. S. Nat. Mus., 72(18): 16, figs. 3a-b, pl. 2. ♂ HT (USNM) from Belden, Plumas Co., California. – Shelley, 1998, Arthropoda Selecta, 6: 9, figs. 8-9, 11-13, 15-18.

Bdellozonium sequoium Chamberlin, 1941, Bull. Univ. Utah, 31(12): 5. ♀ HT (USNM) from [12 miles northeast of?] Hammond, Tulare Co., California. Synonymized by Shelley, 1998.

Bdellozonium rothi Chamberlin, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 68: 2. ♂♀ ?ST (USNM) from 14 miles west of Grant's Pass, Josephine Co., Oregon. Synonymized by Shelley, 1998.

Range: Southwestern Oregon south to Mariposa and Monterey counties, California (map, Shelley, 1998, fig. 26).

Bdellozonium quicki (Chamberlin)

Calzonium quicki Chamberlin, 1954, Proc. Biol. Soc. Washington, 67: 232. ♀HT (USNM) from Chowchilla Mountain, 0.75 miles north of Signal Peak, Mariposa Co., California.

Bdellozonium quicki: Shelley, 1998, Arthropoda Selecta, 6: 12, figs. 10, 14.

Genus **Stenozonium** Shelley

Stenozonium Shelley, 1998, Arthropoda Selecta, 6: 12. Type species: *S. exile* Shelley, by original designation.

Two species, Oregon, northern California.

Stenozonium benedictae Shelley

Stenozonium benedictae Shelley, 1998, Arthropoda Selecta, 6: 13, figs. 21c, 25. ♂ HT (USNM) from a site beside Hy. 242, 16 miles southwest of McKenzie Pass, Lane Co., Oregon.

Range: Benton, Lane, Lincoln, and Linn counties, central western Oregon (map, Shelley, 1998, fig. 26).

Stenozonium exile Shelley

Stenozonium exile Shelley, 1998, Arthropoda Selecta, 6: 12, figs. 19-21a-b, 22-24. ♂ HT (VMNH) from Arcata Community Forest, Humboldt Co., California.

Range: Several localities in Humboldt Co., California.

Subfamily Polyzoniinae Newport

Polyzoniinae Bollman, 1893, Bull. U. S. Nat. Mus., 46: 154 (first use at subfamily level). – Shelley, 1998, Arthropoda Selecta, 6: 15.

Two tribes, three genera: eastern North America, Eurasia.

Tribe Petaserpetini Shelley

Petaserpetini Shelley, 1998, Arthropoda Selecta, 6: 15.

One genus, eastern North America.

Genus **Petaserpes** Cope

Petaserpes Cope, 1870, Trans. American Entom. Soc., 3: 65. Type species: *P. rosalbus* Cope, by monotypy. – Shelley, 1998, Arthropoda Selecta, 6: 16.

Hexaglena McNeill, 1887, Proc. U. S. Nat. Mus., 10: 328. Type species: *H. cryptocephala* McNeill, by monotypy. Synonymized by Shelley, 1998.

Six species, eastern North America.

This genus has been almost without exception considered a synonym of *Polyzonium* by American authors, prior to Shelley's discovery of generic level differences from that West Palearctic taxon.

Petaserpes bikermani (Causey)

Polyzonium bikermani Causey, 1951, Proc. Biol. Soc. Washington, 64: 138, fig. 1. ♂ LT (FSCA) from Devil's Den State Park, Washington Co., Arkansas.

Petaserpes bikermani: Shelley, 1998, Arthropoda Selecta, 6: 21, figs. 33-35.

The holotype of this name was apparently not received at the published depository (ANSP); a lectotype (?neotype) was selected by Shelley from the paratype series at FSCA.

Petaserpes cryptocephalus (McNeill)

Hexaglena cryptocephala McNeill, 1887, Proc. U. S. Nat. Mus., 10: 328. 4♂, 3♀ ST (USNM) from Bloomington Township, Monroe County, Indiana. One of the males was designated lectotype, the remaining specimens as lectoparatypes by Shelley (1998).

Polyzonium divaricatum Loomis, 1971, Florida Entom., 54: 157, figs. 14-17. ♂ HT (USNM) from "...mixed woods NW of Higgins Lake, Roscommon Co.," Michigan. Synonymized by Shelley, 1998.

Petaserpes cryptocephalus: Shelley, 1998, Arthropoda Selecta, 8: 18, figs. 30-32.

Range: Northeastern North America, from southern Quebec, Michigan, and Vermont south through the Appalachians to western North Carolina (map, Shelley, 1998, fig. 47).

Specimens of this species have been recorded under the names *Polyzonium bivirgatum* and *P. rosalbum* by numerous authors (detailed by Shelley, 1998: 18), chiefly during the long period when the genus was considered to be monotypic in North America.

Petaserpes lateralis (Shelley)

Polyzonium laterale Shelley, 1976, Proc. Biol. Soc. Washington, 88 : 377, figs. 5-8. ♂ HT (VMNH) from Linville Gorge, Burke Co., North Carolina.

Petaserpes lateralis: Shelley, 1998, Arthropoda Selecta, 8: 22, figs. 43-45.

Range: Southern Blue Ridge province in western North Carolina and adjacent eastern Tennessee (map, Shelley, 1998, fig. 48).

Petaserpes mutabilis (Causey)

Polyzonium mutabile Causey, 1951, Proc. Biol. Soc. Washington, 64: 139, fig. 2. ♂ HT (INHS) from Winthrop Harbor, Lake Co., Illinois. Incorrectly synonymized with *cryptocephalus* by Chamberlin & Hoffman, 1958.

Polyzonium borealis [*sic*!] Loomis, 1971, Florida Entom., 54: 156, figs. 11-13. ♂ HT (USNM) labeled "north shore of Lake Superior" without further locality, deduced by Shelley (1998) to be in Algoma Co., Ontario. Synonymized by Shelley, 1998.

Polyzonium quadricauda [*sic*!] Loomis, 1971, Florida Entom., 54: 159, figs. 27-29. ♂ HT (USNM) from Stony Brook State Park, Steuben Co., New York. Synonymized by Shelley, 1998.

Petaserpes mutabilis: Shelley, 1998, Arthropoda Selecta, 8: 21, figs. 36-39.

Range: Northern peninsula of Michigan south through Wisconsin to central Illinois; also disjunct populations noted for western New York, southeastern Michigan, and southern Ontario (map, Shelley, 1998, fig. 47).

Petaserpes rosalbus Cope

Petaserpes rosalbus Cope, 1879, Trans. American Entom. Soc., 3: 65. 18 ST (ANSP) from ". . .the western slopes of the Cumberlands, in the northern part of East Tennessee." A ♂ was selected as lectotype, the remaining specimens as lectoparatypes, by Shelley, 1998.

Petaserpes rosalbus: Shelley, 1998, Arthropod Selecta, 8: 18, figs. 27-29.

Range: Southeastern United States, from eastern Tennessee through Alabama and South Carolina to central-western Georgia (map, Shelley, 1998, fig. 47). Disjunct localities in Kentucky and Virginia may reflect inadequate collecting efforts in the intervening areas.

Chiefly in the combination *Polyzonium rosalbum* this name was indiscriminately applied to several other species of *Petaserpes* (details in Shelley, 1998). As that author pointed out, Loomis (1971: 161) unjustifiably designated as neotype a specimen later discovered to be actually *P. cryptocephalus* instead of searching for Cope's original material in the likely depositories.

Petaserpes strictus (Shelley)

Polyzonium strictum Shelley, 1976, Proc. Biol. Soc. Washington, 88: 375, figs. 1-4. ♂ HT (USNM) from site along county road 1730, 4.4 miles northeast of McGrady, Wilkes Co., North Carolina.

Petaserpes strictus: Shelley, 1998, Arthropoda Selecta, 8: 22, figs. 40-42.

Range: Piedmont and Blue Ridge provinces in Virginia and North Carolina, extending into the Coastal Plain in the latter state (map, Shelley, 1998, fig. 47).

Family Siphonotidae Cook

Siphonotidae Cook, 1895, Ann. New York Acad. Sci., 9: 2. – Hoffman, 1977, Deutsch. Entom. Zeitschr., NF 24: 429 (classification).

Eleven generic names are referable here, many of them perhaps superfluous, with species in all tropical regions (anthropochorism is apparently responsible for many distributional patterns). The family is not native to North or Middle America.

Genus **Rhinotus** Cook

Rhinotus Cook, 1896, Brandtia (11): 50. Type species: *Siphonotus africanus* Cook, 1896, by monotypy. – Hoffman, 1977, Deutsch. Entom. Zeitschr., NF 24: 430.

Siphonotus (nec Brandt, 1837) Pocock, 1894, Journ. Linnean Soc. London, 24: 479, *et auct. seq.*

Siphonoconus (nec Attems, 1930) Causey, 1965, Proc. Louisiana Acad. Sci., 28: 52.

Number of species uncertain, possibly only one, Neotropical region, West Africa, East Indies. The several species named from Panama are listed below with the expectation that they may prove to be only synonyms of *purpureus*.

Junior generic synonyms based on extralimital taxa are omitted, see Hoffman, 1980.

Rhinotus angulifer (Chamberlin), new combination!

Siphonotus angulifer Chamberlin 1940, Bull. Univ. Utah, 30(9): 16. HT (USNM) from Barro Colorado Island, Canal Zone, Panama.

Rhinotus centralis (Chamberlin), new combination!

Siphonotus centralis Chamberlin, 1940, Bull. Univ. Utah, 30(9): 16. HT (USNM) from Barro Colorado Island, Canal Zone, Panama.

Rhinotus panamanus (Loomis), new combination!

Siphonotus panamanus Loomis, 1964, Fieldiana: Zoology, 47: 122, figs. 12, I-K. ♂ HT (FMNH) from Chilibrillo Cave, near Chilibre, Prov. Panama, Panama.

Recorded also (Loomis, 1964) from Barro Colorado Island. Although Loomis distinguished the three species recorded from that site by peripheral characters, I am not confident that a revision of this genus will ratify his findings.

Rhinotus purpureus (Pocock)

Siphonotus purpureus Pocock, 1894, Journ. Linnean Soc. London, 24: 479, pl. 37, fig. 5. ♀ ST (BMNH) from St. Vincent, Lesser Antilles. – Loomis, 1934, Smithsonian Misc. Coll., 89(14): 9.

?*Siphonotus africanus* Cook, 1896, American Natur., 30: 842, pl. 18, figs. 1-15. ST (USNM) from Freetown, Sierra Leon.

Siphonotus miamiensis Causey, 1953, Florida Entom., 36: 71, figs. 1, 2. ♂ HT (INHS) from Miami, Dade Co., Florida. Synonymized by Causey, 1965.

Siphonoconus purpureus: Causey, 1965, Proc. Louisiana Acad. Sci., 28: 53, fig. 1.

Range: Not known with certainty. In tropical America recorded from Surinam, Venezuela, Trinidad, Tobago, St. Vincent, Guadeloupe, Martinique, Dominica, Hispaniola, Jamaica, southern Florida, Louisiana, Belize, Costa Rica, and Panama, generally from areas of human development. Very similar, if not identical, species are known from West Africa, Madagascar, Mauritius, and the East Indies; many are basonyms of superfluous generic names.

Order Spirobolida Bollman

Several species of this order **appear** to have been described in the wrong order, as members of *Spirostreptus* (Humbert & DeSaussure, 1870: 175-177) and have been so cited by a number of subsequent authors. Obviously in the 1870 publication, the generic heading for *Spirobolus* was omitted immediately following the entry for *Spirostreptus teres*, presumably during typesetting. As indicated by the usage by Humbert & Desaussure in 1872 (:173-177), the original generic combination for the species *laticaudatus*, *nattereri*, *macrourus*, *acutus*, *paraensis*, *crassicornis*, *woodi*, *ignobilis*, and *californicus* should be considered as "Spirobolus." This name is also present on the original type labels of specimens in the Naturhistorisches Museum, Wien.

Family Spirobolidae Bollman

Spirobolinae Bollman, 1893, Bull. U. S. Nat. Mus., 46: 156.

Spirobolidae (in part) Cook, 1895, Ann. New York Acad. Sci., 9: 7.

Spirobolidae Brolemann, 1913, Bull. Soc. ent. France, p. 476; 1914, Ann. Soc. ent. France, 83: 29.– Keeton, 1960, Mem. American Entom. Soc., 17: 28 (revision).

Five genera, southern Canada to Guatemala; China.

Subfamily Spirobolinae Bollman

Spirobolinae Keeton, 1960, Mem. American Entom. Soc., 17: 31.

Genus **Aztecolus** Chamberlin

Aztecolus Chamberlin, 1943, Bull. Univ. Utah, 8(3): 28. Type species: *Aztecolus nigrior* Chamberlin, 1943, by original designation and monotypy. –Keeton, 1960, Mem. Amer. Entom. Soc., 17: 335 (revision).

Three species, northern Mexico: Nuevo León, Tamaulipas, Zacatecas.

Removed from genus: *Aztecolus collaris* Chamberlin 1953 (see *Hiltonius*).

Aztecolus nigrior Chamberlin

Spirobolus nigrior Chamberlin, Ent. News, 52: 253. ♀ HT (USNM) from Horsetail Falls, near Villa Santiago, Nuevo León, México.

Aztecolus nigrior: Chamberlin, 1943, Bull. Univ. Utah, 8(3): 28, figs. 28, 29.—Keeton, 1960, Mem. American Ent. Soc. 17: 35, figs. 3, 105-09, 119-21.

Range: Central Mexico (Nuevo León and Zacatecas).

Aztecolus pablillo Chamberlin

Aztecolus pablillo Chamberlin, Proc. Acad. Nat. Sci. Philadelphia, 99: 47, figs. 48, 49. ♂ HT (ANSP) from Pablillo, Nuevo León, Mexico.

Range: Central eastern Mexico (Nuevo León, Tamaulipas).

Aztecolus productus Loomis

Aztecolus productus Loomis, 1968, Journ. Kansas Ent. Soc., 41: 391, figs. 13-14. ♂ HT (USNM) from 10 miles (16 km) east of San Roberto on Hy. 60, Nuevo León, Mexico.

Genus **Chicobolus** Chamberlin

Chicobolus Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 46. Type species: *Chicobolus pilsbryi* Chamberlin, by original designation and monotypy. – Keeton, 1960, Mem. American Entom. Soc., 17: 39 (revision).

Incobolus Chamberlin, 1955, Bull. Univ. Utah, 11(5): 7. Type species: *Incobolus thaumastus* Chamberlin, by original designation and monotypy. Synonymized by Keeton, 1960.

One species, southeastern United States.

Chicobolus spinigerus (Wood)

Spirobolus spinigerus Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 15. Type material unknown, presumed lost, from "Florida" and "South Carolina." TL restricted by Causey (1955) to Everglades National Park, Florida (but no neotype was designated).

Spirobolus bahamiensis Bollman, 1893, Bull. U. S. Nat. Mus. 46: 190. Type material; presumed lost, supposedly from San Salvador, Bahamas. Synonymized by Keeton (1960: 40).

Spirobolus paludis Chamberlin, 1918, Ann. Ent. Soc. America, 11: 374. ♂ HT (MCZ) from Mixon's Hammock, Okefenokee Swamp, Charlton Co., Georgia. Synonymized by Loomis (1943: 398).

Chicobolus pilsbryi Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 46, figs. 46, 47. ♀ HT (ANSP) from Boca Chica Key, Monroe Co., Florida. Synonymized by Keeton (1960: 40).

Incobolus thaumastus Chamberlin, 1955, Bull. Univ. Utah, 11(5): 9, figs. 1-4. Type material (AMNH?, perhaps lost), labeled only "Peru." Considered to be possibly from Peru, Hillsborough Co., Florida, by Keeton (1960: 42). Synonymized by Keeton (1960: 40).

Chicobolus jucundus Causey, 1955, Journ. Kansas Ent. Soc., 28: 77. ♂ HT (?FSCA) from Pensacola, Escambia Co., Florida. Synonymized by Keeton (1960: 40).

Chicobolus spinigerus: Causey, 1955, Journ. Kansas Ent., Soc., 28: 76. First use of combination.

Chicobolus spinigerus: Keeton, 1960, Mem. American Ent. Soc., 17: 40-50, figs. 2, 12, 19, 57-63, 78-81, 94-95, 122-126. Synonymy, description, variation, distribution.

Range: Entire Florida Peninsula, northeast to Charleston, South Carolina, and southernmost Alabama.

Genus **Narceus** Rafinesque

Narceus Rafinesque, 1820, Annals of Nature, 1: 8. Type species: *Narceus tinctorius* Rafinesque, by monotypy. – Hoffman & Crabill, 1953, Florida Entom. 36: 80 (reinstatement). – Keeton, 1960, Mem. Amer. Ent. Soc., 17: 62 (revision).

Rhexenor Rafinesque, 1820, Annals of Nature, 1: 8. Type species: *Rhexenor annularis* Rafinesque, by monotypy. Synonymized by Hoffman & Crabill (1953: 81).

Spirobolus of authors, not Brandt, 1833.

Arctobolus Cook, 1904, Harriman Alaska Exped., 8: 64. Type species: *Arctobolus onondaga* Cook, by original designation and monotypy.

Three species, eastern North America (Quebec to Florida, Nebraska to eastern Texas).

Data presented by Shelley & Filka (1980: 18) suggest conspecificity of the nominal species *Narceus americanus* and *annularis*; the situation requires a careful reassessment.

Narceus americanus (Palisot de Beauvois)

Julus americanus Palisot de Beauvois, 1817, Insectes recueillis en Afrique et en Amérique. 9: pl. IV, fig. 3. Selected as valid name by Hoffman (1951: 15). Type material unknown, probably lost. "Etats-Unis d'Amérique," restricted to Charleston County, South Carolina, by Keeton (1960), although without lectotype designation.

Julus americae borealis Palisot de Beauvois, 1817, ibid., 9: 155 (not binomial).

Narceus tinctorius Rafinesque, 1820, Annals of Nature, 1: 8. Type material unknown, description possibly based solely on a drawing. "...in the woods of Kentucky," restricted to Natural Bridge, Powell Co., Kentucky by Causey (1955: 71). Synonymy with *americanus* implied by Hoffman (1953), formalized by Keeton (1960).

Julus palmiger Gervais, 1847, in: Walckenaer & Gervais, Hist. nat. Insectes aptères, 4: 190. ♀ HT (MNHN, *vidi*!) from "Guyane française," obviously mislabeled. **New Synonymy!**.

Julus atratus Girard, 1853, in: Marcy, Exploration of Red River of Louisiana, p. 244. Type material unknown, "Prairie Mer Rouge," Morehouse Parish, Louisiana. Synonymized by Causey (1955).

Julus crassus Motschulsky, 1857, Etudes Entomologiques, anneé 1856, p. 4. Type material unknown. "Les rives du lac Pontchartrain," Louisiana. Synonymized by Keeton (1955). Junior primary homonym of *Julus crassus* Linnaeus, 1758.

S[*pirobolus*][*sic*!] *woodi* Humbert & DeSaussure, 1870, Rev. Mag. Zool., (2)22: 177. ♂ HT (NMW), from "America-borealis, Saint-Louis," Synonymized with *tinctorius* by Causey (1955: 71); with *americanus* by Keeton (1960).

Spirobolus pensacolae Bollman, 1887, Ann. New York Acad. Sci., 4: 29. ♀ HT (USNM) from Pensacola, Escambia Co., Florida. Synonymized by Keeton (1960).

Spirobolus oklahomae Chamberlin, 1931, Ent. News, 42: 98, fig. 1. ♂ HT (USNM) from Murray County, Oklahoma. Synonymized by Keeton (1960).

Arctobolus dolleyi Loomis, 1943, Bull. Mus. Comp. Zool., 92: 398, fig. 13. ♂ HT (MCZ) from Feemster's Lake, near Tupelo, Lee Co., Mississippi. Synonymized by Keeton (1960).

Spirobolus ramstadti Chamberlin, 1943, Bull. Univ. Utah, 8(2): 7, figs. 12-16. ♂ HT (USNM) from Punta Gorda, Charlotte Co., Florida. Synonymized by Keeton (1960).

Spirobolus melanior Chamberlin, 1943, Bull. Univ. Utah, 8(2): 9. ♀ HT (USNM) from Steven F. Austin State Park, 5 miles east of Sealy, Austin Co., Texas. Synonymized by Keeton (1960).

Narceus americanus: Keeton, 1960, Mem. American Ent. Soc., 17: 86, figs. 17, 30-31, 44-51, 69-74, 84-85, 89-91. Revision: synonymy, variation, distribution.

Range: Southeastern and central United States, Virginia to Illinois, south to Florida and eastern Texas (Keeton, 1960, Map 2).

Narceus annularis (Rafinesque)

Rhexenor annularis Rafinesque, 1820, Annals of Nature, 1: 8. Type material unknown, probably none preserved. "...the highland hills of New York;" arbitrarily restricted by Chamberlin & Hoffman (1958: 166) to vicinity of Catskill, Greene County, New York, a locality mentioned elsewhere in Rafinesque's 1820 paper.

Julus marginatus Say, 1821, Journ. Acad. Nat. Sci. Philadelphia, 2: 105. Type material unknown, probably none existant. Philadelphia, Pennsylvania, designated type locality by Causey (1955: 73). Synonymized with *annularis* by Keeton (1960).

Spirobolus agilis Cope, 1869, Trans. American Philos. Soc., 11: 181. Type material unknown. Giles County, Virginia. Synonymized by Keeton (1960).

S.[*pirobolus*] [*sic*!] *ignobilis* Humbert & DeSaussure, 1870, Rev. Mag. Zool. (2)22: 177. ♂ HT (NMW) from "America borealis," arbitrarily restricted to Greene County, New York, by Keeton (1960), but no neotype designated .

Arctobolus onondaga Cook, 1904, Harriman Alaska Exped., 4: 64. ♂ HT (USNM) from Kirkville, Onondaga Co., New York. Synonymized by Hoffman & Crabill (1953).

Spirobolus orophilus Chamberlin, 1943, Bull. Univ. Utah, 8(2): 8, figs. 17-21. ♂ HT (USNM), from Gatlinburg, Great Smoky Mountains National Park, Sevier Co. Tennessee. Synonymized by Keeton (1960).

Spirobolus scotti Chamberlin, 1943, Proc. Biol. Soc. Washington, 56: 148, figs. 12-14. ♂ HT (USNM) labeled Houston, Harris Co., Texas; locality incorrect, material certainly originated in the Appalachian region, possibly Houston Co., Tennessee. Synonymized by Keeton (1960).

Narceus annularis: Keeton, 1960, Mem. American Ent. Soc., 17: 66-86, figs. 1, 7, 10, 16, 20, 22-29, 35-43, 64-68, 82-83, 86-88, 192-193, Map 1. Revision, synonymy, variation, distribution.

Narceus americanus annularis: Shelley, 1988, Canadian Journ. Zool., 66: 1642.

Range: Northeastern North America: Quebec and Wisconsin south to Tennessee and Missouri (Keeton, 1960, Map 1).

Narceus gordanus (Chamberlin)

Spirobolus gordanus Chamberlin, 1943, Bull. Univ. Utah, 8(2): 5, figs. 6-11. ♂ HT (USNM?) from Punta Gorda, Charlotte County, Florida.

Arctobolus keysi Loomis, 1944, Psyche, 51: 169, fig. 2. ♂ HT (MCZ) from Lantana, Palm Beach Co., Florida. Synonymized by Keeton (1960).

Narceus gordanus: Keeton, 1960, Mem. American Ent. Soc. 17: 94, figs. 14-15, 32-34, 52-56, 75-77, 92-93. Description, synonymy, variation.

Range: Peninsular Florida, with an apparently disjunct record for Charleston, South Carolina that requires verification.

Subfamily Tylobolinae Keeton

Tylobolinae Keeton, 1960, Mem. American Ent. Soc., 17: 96.

Genus **Hiltonius** Chamberlin

Hiltonius Chamberlin, 1918, Proc. Biol. Soc. Washington, 31: 166. Type species: *H. pulchrus* Chamberlin, by original designation and monotypy. – Keeton, 1960, Mem. American Ent. Soc., 17: 97 (revision).

Eight nominal species, southern California and Arizona south to Oaxaca, apparently disjunct in Guatemala.

Removed from genus: *Hiltonius thebanus* Chamberlin [see *Onychelus* (Atopetholidae)].

Hiltonius australis (Grinnell)

Spirobolus australis Grinnell, 1908, Univ. Calif. Publ. Paleont., 5: 210, pl. 15, figs. 13, 14. ST (Univ. Calif. Berkeley) from "asphalt beds at Rosemary" [Rancho La Brea tar pits] (Pleistocene-Recent), Los Angeles Co., California.

Hiltonius? australis: Hoffman, 1969, in: Treatise on Invertebrate Paleontology, Part R, p. R587.

This name is almost certainly a senior synonym of either *H. pulchrus* or of *Tylobolus claremontus*, the only large spiroboloids currently known to occur in Los Angeles Co., placement in *Hiltonius* is therefore somewhat arbitrary pending comparison of material.

Hiltonius carpinus carpinus Chamberlin

Hiltonius carpinus Chamberlin, 1943, Bull. Univ. Utah, 34 (7): 21, figs. 34-36. ♂ HT (USNM) from 2 miles south of Limon, Tamaulipas, Mexico.

Hiltonius crassus Chamberlin, 1943, Bull. Univ. Utah, 34 (7): 21, fig. 37. ♂ HT (USNM) from Ixtapan del Oro, Mexico. Synonymized by Keeton, 1960.

Hiltonius tepoztlanus Chamberlin, 1943, Bull. Univ. Utah, 34 (7): 21. MS name inadvertantly validated by Chamberlin, objective synonym of *H. carpinus*, with same type specimen. Synonymized by Keeton, 1960.

Hiltonius carpinus carpinus: Keeton, 1960, Mem. American Ent. Soc., 17: 106, figs. 171-177, 200, 204, 211-213.

Range: Sierra Madre Oriental, Tamaulipas to Mexico.

Hiltonius carpinus vulcan (Chamberlin)

Aztecolus vulcan Chamberlin, 1952, Amer. Midl. Nat., 50: 148, figs. 25, 26. ♂ HT (USNM) from Volcán Tajumulco, Dept. San Marcos, Guatemala. Synonymized by Keeton, 1960.

Hiltonius carpinus vulcan: Keeton, 1960, Mem. American Ent. Soc., 17: 107.

Range: Known only from the type locality. In view of the wide geographic separation of this population from the main part of the range on the Mexican Plateau, perhaps specific status is more appropriate for this taxon even though Keeton could detect only minor differences.

Hiltonius erythrotypus (Chamberlin)

Hiltonius erythrotypus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 22. ♀ HT (lost), from Santa Rosa, Distrito Federal, Mexico.

Considered by Keeton to be a possible junior synonym of *mexicanus* (DeSaussure).

Hiltonius flavocinctus Loomis

Hiltonius flavocinctus Loomis, 1968, Journ. Kansas Ent. Soc., 41: 392, figs. 15-18. ♂ HT (USNM) from 10 miles/16 km east of San Roberto on Rt. 60, Nuevo León, Mexico.

Hiltonius fossulifer (Pocock)

Spirobolus fossulifer Pocock, 1908, Biol. Centr.-Amer., Diplopoda, p. 78, pl. 7, fig. 2. ♂ HT (lost from BMNH) from Omilteme, Guerrero, Mexico.

Hiltonius fossulifer: Keeton, 1960, Mem. American Ent. Soc., 17: 102.

Considered by Keeton to be a possible senior synonym of *carpinus* Chamberlin.

Hiltonius hebes (Bollman)

Spirobolus hebes Bollman, 1887, Ann. New York Acad. Sci., 4: 31. Location of types, if extant, unknown. (?USNM), from San Diego, California.

Tylobolus hebes: Cook, 1904, Harriman Alaska Exped., 8: 66.

Hiltonius balboanus Chamberlin, 1941, Bull. Univ. Utah, 31(11): 10. fig. 11. ♂ HT (USNM) from Balboa Park, San Diego, California. Synonymized by Loomis & Hoffman, 1948.

Hiltonius hebes: Loomis & Hoffman, 1948, Proc. Biol. Soc. Washington, 61: 51.

Range: San Diego County, California, and adjacent areas of Baja California Norte, Mexico.

Hiltonius mexicanus (DeSaussure)

Julus mexicanus DeSaussure, 1859, Linnaea Ent., 13: 332. ♂ ST (MHNG) from "La Mexique", later (1860: 366) amplified by specific mention of Cuernavaca, Cuatala, and the hacienda d'Atlihuayan near Yautepec. TL incorrectly restricted by Keeton (1960: 101) to Tancitaro, Michoacan.

Spirobolus mexicanus: DeSaussure & Humbert, 1872, Mission scientifique au Mexique, Myriapodes, p. 177.

Spirobolus mexicanus: Carl, 1919, Rev. suisse zool., 27: 402, figs. 40-42. Drawings of gonopods from "type ♂".

Eurelus tancitarus Chamberlin, 1941, Ent. News, 52: 255, figs. 5-7. ♂ HT (USNM) from Tancitaro, Michoacan, Mexico. Synonymized by Keeton (1960).

Hiltonius federalis Chamberlin, 1943, Bull. Univ. Utah, 34(7): 22, fig. 38. Imm. ♂ HT (USNM) from Salazar, 3000 m., Distrito Federal, Mexico. Synonymized by Keeton (1960).

Hiltonius michoacanus Chamberlin, 1943, Bull Univ. Utah, 34(7): 23, figs. 39-41. ♂ HT (USNM) from 10 miles north of Zamora, Michoacan, Mexico. Synonymized by Keeton (1960).

Hiltonius veracruzanus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 24, figs. 42, 43. ♂ HT lost, from 18 miles west of Perote, Veracruz, Mexico. Synonymized by Keeton (1960).

Hiltonius mexicanus: Keeton, 1960, Mem. American Ent. Soc., 17: 100, figs. 166-170, 199, 202-203, 209-210.

Range: Michoacan, Morelos, Distrito Federal, and west-central Veracruz, Mexico.

Keeton's designation of a site in Michoacan was somewhat arbitrary, and did not involve selection of a lectotype from what may have been an extensive series of syntypes at Genève. The specimen labeled "type" examined by Keeton is presumably the same as treated by Carl in 1919, but there is no evidence that other specimens may have been involved, some of them perhaps with specific locality data. Aside from Genève, for instance, there are syntypes of *mexicanus* in the Berlin Zoological Museum, donated by DeSaussure. Until this point has been researched, perhaps it is best to set aside the Keeton's restricted type locality.

Hiltonius mimus Chamberlin

Hiltonius mimus Chamberlin, 1941, Bull. Univ. Utah, 31(11): 9, figs. 8, 9. ♂ LT (USNM) from Mountain Springs, San Diego Co., California.

Hiltonius pius Chamberlin, 1941, Bull. Univ. Utah, 31(11): 7. ♀ HT (USNM) from Mountain Springs, San Diego Co., California. Synonymized by Keeton (1960).

Hiltonius congregans Chamberlin, 1941, Bull. Univ. Utah, 31(11): 9, fig. 10. Location of ♂ HT uncertain, 3 imm. ♂ PTs (USNM) from Mountain Springs, San Diego Co., California. Synonymized by Keeton (1960), who felt that these three synonymous names were based on individuals of one species from a single sample.

Hiltonius pulchrus Chamberlin

Hiltonius pulchrus Chamberlin, 1918, Proc. Biol. Soc. Washington, 31: 166. ♂ HT (MCZ) from Claremont, Los Angeles Co., California.

Hiltonius conservatus Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 53, figs. 61-63. ♂ HT (ANSP) from Fort Tejon, Kern Co., California [possibly in error]. Synonymized by Keeton (1960).

Hiltonius palmaris Loomis, 1953, Journ. Washington Acad. Sci., 43: 418, figs. 6-9. ♂ HT (USNM) from Palm Springs, Riverside Co., California. Synonymized by Keeton (1960).

Hiltonius pulchrus: Keeton, 1960, Mem. American Ent. Soc., 17: 109, figs. 11, 178-183, 197, 206, 216.

Range: Southern California

Hiltonius reptans (von Porat)

Spirobolus reptans von Porat, 1888, Ann. Soc. ent. Belgique, 32: 250. Two ♀ ST (ISNB), from Guanajuato, Mexico (E. Dugés leg.).

Spirobolus callipus Bollman, 1893, Bull. U. S. Nat. Mus. 46: 191. ♂♀ ST (formerly USNM, apparently lost), from Guanajuato, Mexico (E. Dugés leg.). Synonymized by Hoffman, 1998.

Hiltonius callipus: Keeton, 1960, Mem. American Ent Soc., 17: 114. – Loomis, 1968, Bull. U. S. Nat. Mus., 266: 92.

Hiltonius reptans: Hoffman, 1998, Myriapodologica 5: 64.

Genus **Tylobolus** Cook

Tylobolus Cook, 1904, Harriman Alaska Exped., 8: 65. Type species: *T. deses* Cook, by original designation. – Keeton, 1960, Mem. American Ent. Soc. 17: 114 (revision). – Keeton, 1966, Trans. American Ent. Soc., 92: 17.

Californibolus Verhoeff, 1944, Bull. Southern California Acad. Sci., 43: 55. Type species: *C. michelbacheri* Verhoeff, by monotypy. Synonymized by Keeton (1960).

Auxobolus Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 163. Type species: *A. ergus* Chamberlin, by original designation. Synonymized by Keeton (1960).

Six nominal species, one with a subspecies; Baja California to the Columbia River, west of the Sierra Nevada, southern Utah.

Tylobolus castaneus Chamberlin

Tylobolus castaneus Chamberlin, 1918, Proc. Biol. Soc. Washington, 31: 166. Imm. ♂ HT (USNM) from Brookdale, Santa Cruz Co., California.

Tylobolus discipulus Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 165, figs. 3, 4. ♂ HT (USNM) from Ione, Amador Co., California. Synonymized by Keeton, 1960.

Tylobolus friantus Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 165, figs. 8, 9. ♂ HT (USNM) from Friant, Fresno Co., California. Synonymized by Keeton, 1960.

Tylobolus castaneus: Keeton, 1960, Mem. American Ent. Soc., 17: 126, figs. 13, 18, 242-252. – Keeton, 1966, Trans. American Ent. Soc., 92: 19, fig. 2.

South and east of San Francisco Bay; western slopes of the Sierra Nevada range, south to Sequoia National Park (Keeton, 1966, Fig. 2).

Tylobolus claremontus Chamberlin

Tylobolus claremontus Chamberlin, 1918, Proc. Biol. Soc. Washington, 31: 165. ♂ HT (MCZ) from Claremont, Los Angeles Co., California.

Tylobolus stebbinsi Chamberlin, 1944, Proc. Biol. Soc. Washington, 57: 113, figs. 4, 5. ♂ HT (USNM) from Meadow Canyon (Santa Monica Mountains), Los Angeles Co., California. Synonymized by Keeton (1960).

Auxobolus simulatus Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 165, figs. 12, 13. ♂ HT (USNM) from Riverside, Riverside Co., California. Synonymized by Keeton (1960).

Tylobolus claremontus: Keeton, 1960, Mem. American Ent. Soc., 17: 121, figs. 6, 21, 224-227. – Keeton, 1966, Trans. American Ent. Soc., 92: 17, fig. 2.

Extreme northwestern Baja California Norte, north chiefly along the coast as far as the Santa Monica Mountains, Los Angeles Co., California (Keeton, 1966, fig. 2).

Tylobolus deses deses Cook

Tylobolus deses Cook, 1904, Harriman Alaska Exped., 8: 65, pl. 4, figs. 3a-h. ♂ ST (USNM) from "California". – Keeton, 1960, Mem. American Ent. Soc., 17: 126. – Keeton, 1966, Trans. American Ent. Soc., 92: 18, fig. 1.

Tylobolus sp.: Keeton, 1960, Mem. American Ent. Soc., 17: 133, fig. 223 (♀♀ only).

Tylobolus deses deses: Buckett & Gardner, 1966, Proc. Biol. Soc. Washington, 79: 43, figs. 1-9.

Coastal ranges of central California, Sonoma to Santa Cruz counties (Keeton, 1966, fig. 1).

Buckett & Gardner (1966: 43) identify Stanford University, at Palo Alto, San Mateo Co., California, as the probable type locality of this taxon.

Tylobolus deses magnificus Buckett & Gardner

Tylobolus deses magnificus Buckett & Gardner, 1966, Proc. Biol. Soc. Washington, 79: 45. ♂ HT (UCD) from 2 mi. west of Cordelia, Solano Co., California.

Eastern side of San Francisco Bay, south to Merced Co., California (Keeton, 1966, fig. 1).

Tylobolus loomisi Keeton

Tylobolus ergus [nec Chamberlin, 1949] Keeton, 1960, Mem. American Ent. Soc., 17: 123, figs. 228-233.

Tylobolus loomisi Keeton, 1966, Trans. American Entom. Soc., 92: 20, fig. 2. ♂ HT (USNM) from south of Fort Tejon, Kern Co., California.

Range: Kern and Santa Barbara counties, California (Keeton, 1966, fig. 2).

Tylobolus monachus (Chamberlin)

Auxobolus monachus Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 165, figs. 10, 11. ♂ HT (USNM) from Hastings Reservation, Monterey Co., California.

Tylobolus monachus: Keeton, 1960, Mem. American Ent. Soc., 17: 124, figs. 234-237.

Range: Monterey and Fresno counties, California (Keeton, 1966, fig. 1).

Tylobolus uncigerus (Wood)

Spirobolus uncigerus Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 15. HT presumed lost, from "California"; restricted by Keeton (1960: 130) to Solano Co., California.

Spirobolus californicus Humbert & DeSaussure, 1870, Rev. & Mag. Zool. (2) 22: 177. HT (NMW) from "California"; restricted by Keeton (1960: 130) to Solano Co., California, without investigation of possible provenance of type. Synonymized by Keeton (1960).

Tylobolus uncigerus: Cook, 1904, Harriman Alaska Exped., 8: 67.

Californibolus michelbacheri Verhoeff, 1944, Bull. Southern California Acad. Sci., 43: 56, figs. 1-3. ♂ HT (ZSM) from Fort Seward, Humboldt Co., California. Synonymized by Keeton (1960).

Californibolus oregonus Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 166, figs. 14, 15. Imm. ♂ HT (USNM) from Springfield, Lane Co., Oregon. Synonymized by Keeton (1960).

Californibolus pontis Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 166, figs. 18, 19. ♂ HT (USNM) from Bridgeville, Humboldt Co., California. Synonymized by Keeton (1960).

Californibolus rectus Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 166, figs. 16, 17. ♂ HT (USNM) from Solano Co., California. Synonymized by Keeton (1960).

Californibolus uncigerus: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 162.

Tylobolus uncigerus: Keeton, 1960, Mem. American Ent. Soc., 17: 128, figs. 194-195, 253-261. – Keeton, 1966, Trans. American Ent. Soc., 92: 23, fig. 1.

Range: Southwestern Washington (Klickitat Co.), south to Mariposa and Santa Cruz counties, California (Keeton, 1966, fig. 1).

Tylobolus utahensis Chamberlin

Tylobolus utahensis Chamberlin, 1925, Pan-Pacific Ent., 2: 60. ♂ HT (USNM) from Zion National Park, Utah. – Keeton, 1960, Mem. American Ent. Soc., 17: 131, figs. 262-264. – Shelley & Bauer, 1997, Great Basin Natur., 57: 232, figs. 2-5.

Range: Inyo Co., California east to extreme southwestern Utah (Kane Co.) (Shelley & Bauer, 1997, fig. 6)

SPECIES NAMES OF QUESTIONABLE STATUS

Tylobolus fredricksoni (Causey)

Californibolus fredricksoni Causey, 1955, Journ. Kansas Entom. Soc., 28: 78, figs, 1, 4, 5. ♂ HT (SMUK), labeled "Douglas County, Kansas".

Tylobolus fredricksoni: Keeton, 1960, Mem. American Entom. Soc., 17: 132, figs. 265-268. – Shelley & Bauer, 1997, Great Basin Natur., 57: 235.

The biogeographic implausibility of an endemic species of *Tylobolus* in Kansas, and the fact that no material has been collected from an unimpeachable locality, suggests that the types of *fredricksoni* may have been simply a mislabeled sample of some Californian species. Keeton (1960: 132) felt that the holotype (in bad condition) was immature, and this is likewise suggested by the appearance of the posterior gonopod in the figures given by both Causey and Keeton, a view not shared by Shelley & Bauer (1997: 236).

Tylobolus viduus Chamberlin

Tylobolus viduus Chamberlin, 1940, Pomona Coll. Journ. Ent. & Zool., 32: 82. ♀ HT apparently lost (but see below), from Hastings Reservation, Monterey Co., California.

The missing type specimen was collected at the same time and same place by the same collector as the type of *Tylobolus monachus*, strong circumstantial evidence that both names are based on the same species. Morever, the liklihood also exists that the "missing" type of *viduus* is actually the type of *monachus*. An identical parallel occurs in the case of *Euzonium crucis* and *Hypozonium arnaudi* (q.v. sub *Octoglena bivirgata*).

Family Floridobolidae Keeton

Floridobolidae Keeton, 1959, Bull. Brooklyn Ent. Soc., 54: 1.

One genus, southeastern United States.

Genus **Floridobolus** Causey

Floridobolus Causey, 1957, Proc. Biol. Soc. Washington, 70: 205. Type species: *Floridobolus penneri* Causey, by original designation. – Keeton, 1959, Bull. Brooklyn Ent. Soc., 54: 2.

One species, endemic in central Florida.

Floridobolus penneri Causey

Floridobolus penneri Causey, 1957, Proc. Biol. Soc. Washington, 70: 206, figs. 1-3. ♂ HT (AMNH) from 10 miles west of the Archbold Biological Station on U.S. Hy. 70, Highlands Co., Florida.

Floridobolus penneri: Keeton, 1959, Bull. Brooklyn Ent. Soc., 54: 2, figs. 1-12, 14-16.

Range: Known so far only from the central Florida ridge in the general vicinity of Lake Placid.

Family Messicobolidae Loomis

Messicobolidae Loomis, 1968, Bull. U. S. Nat. Mus. 266: 81.

There seems little doubt that the species included by Loomis under this name represent a distinctive family-group with close affinities to the Spirobolidae (and perhaps Floridobolidae). Most of the species remain known only from the type series, and some of them from females only, and until a conscientious revision has been undertaken, nothing meaningful can be said about the status of any of the names. For the present, the best option seems to be an uncritical listing of all relevant names without judgement about their status or validity.

Genus **Messicobolus** Brolemann

Messicobolus Brolemann, 1913, Bull. Soc. Ent. France for 1913: 477. Type species: *Spirobolus godmani* Pocock, 1909, by original designation. – Loomis, 1968, Bull. U. S. Nat. Mus., 266: 82.

Oxobolus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 30. Type species: *Oxobolus virilis* Chamberlin, 1922, by original designation. – Loomis, 1968, Bull. U. S. Nat. Mus. 266: 84. Synonymized by Hoffman, 1998.

It is remarkable how many of these large animals are known from a single locality (and single specimen) only.

Species removed from *Messicobolus* (where placed by Loomis): *Spirobolus reptans* von Porat (see *Hiltonius*), *Spirobolus platyops* Pocock (see Spirobolida of uncertain identity).

Messicobolus amulensis (Pocock)

Spirobolus amulensis Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 79. ♀ HT (location unknown, perhaps lost), from Amula, Edo Guerrero, Mexico.

Messicobolus amulensis: Loomis, 1968, Bull. U. S. Nat. Mus., 266: 83.

Messicobolus cinctus (Chamberlin), new combination

Oxobolus cinctus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 32, pl. 13, figs. 4-7. ♂ HT (USNM) from Trece Aguas (5 km southeast Senahú), Dep. Alta Verapaz. – Loomis, 1968, Bull. U. S. Nat. Mus., 266: 84.

Messicobolus collaris (Chamberlin)

Aztecolus collaris Chamberlin, 1953, American Midl. Nat., 50: 148. ♀ HT (FMNH) from Volcán Tajumulco, Dept. San Marcos, Guatemala.

Messicobolus collaris: Loomis, 1968, Bull. U. S. Nat. Mus. 266: 82.

Messicobolus cratus Chamberlin, new combination

Oxobolus cratus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 33, pl. 13, fig. 8. ♀HT (USNM) from "road to Los Pinales", Guatemala (neither Mr. Loomis nor I could identify this locality).– Loomis, 1968, Bull. U. S. Nat. Mus. 266: 84.

Messicobolus distinctus (Kraus), new combination

Oxobolus distinctus Kraus, 1954, Senckenb. Biol., 35: 333, figs. 72-74. ♂HT (SMF) from the Metapan Mountains at Monte Cristo, Dept. Santa Ana, El Salvador. – Loomis, 1968, Bull. U. S. Nat. Mus. 266:84.

Messicobolus eximius (von Porat)

Spirobolus eximius von Porat, 1888, Ann. Soc. Ent. Belgique, 32: 248. ♂ HT (ISNB), from "Guatemala" without further details.

Messicobolus eximius: Loomis, 1968, Bull. U. S. Nat. Mus. 266: 82. – Golovatch, 1997, Bull. Inst. Sci. Natur. Belgique, Entom., 67: 105, figs. 44-50 (figures drawn from lectotype).

Loomis justified allocation of this species to *Messicobolus* by its association with *M. mystecus* by Carl in 1919. Actually Carl never referred to *eximius*; I believe that Loomis intended von Porat's comment (1888: 249) about similarity of these two species.

Messicobolus godmani (Pocock)

Spirobolus godmani Pocock, 1908, in:Biol.Centr.-Amer., Diplopoda, p. 78, figs.1a-d. Location of syntypes unknown, probably lost, from Omilteme, Guerrero, Mexico.

Messicobolus godmani: Brolemann, 1913, Bull. Soc. ent. France for 1913: 477. – Loomis, 1968, Bull. U. S. Nat. Mus. 266: 82.

Messicobolus hoogstraali Chamberlin

Messicobolus hoogstralli (sic!) Chamberlin, 1941, Ent. News, 52: 254, figs. 10-13. ♂ HT (USNM) from Ojo de Aguas, Sabinas Hidalgo, Nuevo León, Mexico.

Messicobolus hoogstraali: Loomis, 1968, Bull. U. S. Nat. Mus. 266: 82.

Messicobolus hoplomerus (Pocock)

Spirobolus hoplomerus Pocock, 1908, Biol. Centr.-Amer., Diplopoda, p. 76, pl. 7, fig 5. Location of ♀ holotype unknown, probably lost. "Costa Cuca" Guatemala (on the Pacific slope, but not located by me).

?*Messicobolus hoplomerus*: Carl, 1918, Rev. suisse Zool., 26: 460, figs. 46-48 (the correctness of the identification is not beyond question).

Messicobolus magnificus (Causey), new combination

Oxobolus magnificus Causey, 1954, Proc. Biol. Soc. Washington, 67: 61, figs. 12-15. ♂ HT (INHS) from three miles northwest of Rancho Monserrate, Chiapas, Mexico. – Loomis, 1968, Bull. U. S.Nat.Mus. 266: 84.

Messicobolus monticola (Pocock)

Spirobolus monticola Pocock, 1908, Biol. Centr.-Amer., Diplopoda, p. 80. ♀HT (location unknown, perhaps lost), from Omilteme, Guerrero, Mexico.

Messicobolus monticola: Loomis, 1968, Bull. U. S. Nat. Mus., 266: 82.

Messicobolus mundus (Chamberlin), new combination

Oxobolus mundus Chamberlin, 1953, Proc. Biol. Soc. Washington, 66: 69. ♂HT (?FMNH) from San Pedro Sula, Honduras. – Loomis, 1968, Bull. U. S. Nat. Mus. 266: 84

Messicobolus mystecus (DeSaussure)

Julus mystecus DeSaussure, 1860, Mém. Soc. Phys. Hist. Nat. Genève, 15: 569, pl. 5, fig. 36. ♂♀ST (MHNG) from Oaxaca (probably the city), Mexico.

Spirobolus mystecus: DeSaussure & Humbert, 1872, Miss. Sci. Mexique, Zool., 6(2): 177. – Pocock, 1908, Biol. Centr.-Amer., Diplopoda, p. 81.

Messicobolus mystecus: Carl, 1919, Rev. Suisse Zool., 27: 386, figs. 13-15.

Messicobolus pictus (Chamberlin), new combination

Messicobolus pictus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 33, pl. 13, fig. 9. ♀ HT (USNM) from Coban, Dept. Alta Verapaz., Guatemala.

Messicobolus pilsbryi Chamberlin

Messicobolus pilsbryi Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, v. 99, p. 53, figs. 64, 65. ♂ HT (ANSP) from Pablillo, Nuevo León, Mexico.

Messicobolus raui Chamberlin

Messicobolus raui Chamberlin, 1941, Bull. Univ. Utah, 31(11): 12. ♂ HT (USNM) from Tamozunchale, San Luis Potosí, Mexico.

Messicobolus santanus (Chamberlin), new combination

Oxobolus santanus Chamberlin, 1953, Proc. Biol. Soc. Washington, 66: 69. ♀ HT (USNM) from head of Rio Santa Ana, San Pedro Sula, Honduras.

Messicobolus semiserratus Loomis

Messicobolus semiserratus Loomis, 1966, Journ. Kansas Ent. Soc., 39: 522, figs. 7-9. ♂ HT (USNM) from Horsetail Falls, Nuevo León, Mexico.

Messicobolus stolli (Pocock)

Spirobolus stolli Pocock, 1908, Biol. Centr.-Amer., Diplopoda, p. 77, pl. 7, figs. 3a-e. ♂♀ syntypes (formerly BMNH, perhaps lost) from "Pachuta" [Department unknown], Guatemala.

Messicobolus stolli: Carl, 1918, Rev. Suisse Zool., 26: 461.

Messicobolus tardus (Causey), new combination

Oxobolus tardus Causey, 1954, Proc. Biol. Soc. Washington, 67: 61, figs. 16-18. ♂ HT (INHS) from 17 miles southwest of Simojovel, Chiapas, Mexico.

Messicobolus tepanecus (DeSaussure)

Julus tepanecus DeSaussure, 1859, Linnaea Entom., 13: 332. – 1860, Mem. Soc. Phys. Hist. Nat. Genève, 15: 568 (sic, =368), figs. 35-35o. ♀ HT (MHNG) from "Les régions chaudes du Mexique. – Cordova.", Vera Cruz, Mexico.

Messicobolus tepanecus: Carl, 1919, Rev. Suisse Zool., 27: 386.

Carl (op. cit.) did not use the above combination *per se*, but in the statement "...*Iulus mystecus* (♂ et ♀) et *I. tepanecus* (♀) . . .appartiennent. . . .au genre *Messicobolus* Bröl. . .." He concluded from a comparison of female type specimens that the two names were probably synonyms. The substantial distance between the type localities, however, justifies their separation until this group has been carefully revised.

Messicobolus totonacus Chamberlin

Messicobolus totonacus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 25, figs. 44-46. ♂ HT (USNM) from Cumbres, Vera Cruz, Mexico.

Messicobolus tzendalus (DeSaussure)

Julus tzendalus DeSaussure, 1860, Mem. Soc. Phys. Hist. Nat. Genève, 15(2): 570 [sic, = 370], fig. 37-37o. ♀ HT (?MHNG), from "Les régions tempérées du Mexique. – Oaxaca."

Messicobolus tzendalus: Loomis, 1968, Bull. U. S. Nat. Mus. 266: 83.

The failure by Carl to mention this name in either of his papers on messicobolids (1918, 1919) raises the suspicion that the female type specimen may have been lost or misplaced prior to his appointment as curator at the Geneva museum.

Messicobolus virilis (Chamberlin), new combination.

Oxobolus virilis Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 31, pl. 12, figs. 11, 12; pl. 13, figs. 1-3. ♂ HT (USNM) from Samoc near Coban, Dep. Alta Verapaz, Guatemala.

Messicobolus zonatus Carl

Messicobolus zonatus Carl, 1918, Rev. Suisse Zool., 26: 462, figs. 49-51. ♂ HT (MHNG) from "Guatemala" without further locality.

Genus **Petenobolus** Loomis

Petenobolus Loomis, 1968, Proc. Biol. Soc. Washington, 81: 508. Type species: *P. antiquorum* Loomis, by original designation.

Two species, restricted to the Peten region of Guatemala.

Petenobolus antiquorum Loomis

Petenobolus antiquorum Loomis, 1968, Proc. Biol. Soc. Washington, 81: 508, figs. 19, 20. ♂ HT (USNM), from Uaxactun, Dept. Peten, Guatemala.

Petenobolus mayanus Loomis

Petenobolus mayanus Loomis, 1968, Proc. Biol. Soc. Washington, 81: 509, figs. 21-24. ♂ HT (USNM) from Uaxactun, Dept. Peten, Guatemala.

Family Allopocockiidae Keeton

The status of a number of small Mesamerican spiroboloids is highly unsettled and their resolution will be contingent upon far more detailed studies of gonopod structure than have been so far undertaken. I had commenced the examination of some Guatemalan species many decades ago, but presented my information to Professor Keeton upon his expressing interest in *Allopocockia* and related taxa. These notes and drawings were not recovered following his untimely demise, and rather than attempt any kind of superficial synthesis solely from inadequate literature sources believe it best to present existing knowledge objectively for the benefit of a future investigator. It is clear that several generic taxa can be distinguished, however.

Genus **Anelus** Cook

Anelus Cook, 1911, Proc. U. S. Nat. Mus. 40: 160. Type species, *A. reduncus* Cook, by original designation.– Shelley & Hoffman, 1995, Myriapodologica 3: 109 (synopsis).

A monotypic genus endemic to Tamaulipas, Mexico, and adjacent states.

Anelus richardsoni (Pocock)

Spirobolellus richardsoni Pocock, 1908, Biol. Centr.-Amer., Diplopoda, p. 87, pl. 7, figs. 7a-e. ♂ and ♀syntypes apparently lost, not in BMNH, from Tampico, Tamaulipas, Mexico.

Anelus richardsoni: Cook, 1911, Proc. U. S. Nat. Mus. 40: 163. – Shelley & Hoffman, 1995, Myriapodologica 3: 109, figs. 1-7 (structure), fig. 8 (map).

Anelus reduncus Cook, 1911, Proc. U. S. Nat. Mus. 40: 162. ♂ and♀♀ syntypes (formerly USNM, apparently lost) from Brownsville, Cameron Co., Texas. Synonymized by Shelley & Hoffman, 1995.

Anelus emarginatus: Loomis, 1968, Journ. Kansas Entom. Soc., 41: 390, figs. 11, 12. ♀ HT (USNM) from monument along Hy. 60 between Iturbide and Linares, Nuevo León, Mexico. Synonymized by Shelley & Hoffman, 1995.

Range: Willacy County, Texas, south to Tampico, Tamaulipas, inland as far as central Nuevo León, Mexico (map, Shelley & Hoffman, 1995, fig. 8).

Genus **Allopocockia** Brolemann

Allopocockia Brolemann, 1913. Bull. Soc. ent. France, p. 478. – 1914, Ann. Soc. Ent. France, 83: 84. Type species: *Spirobolellus tylopus* Pocock, by original designation.

Allopocockia Keeton, 1960, Proc. Biol. Soc. Washington, 73: 133 (as type genus of family).

Two nominal species, endemic in Guatemala and El Salvador.

Kraus (1954: 336) provides a key to four Mesamerican species of "Allopocockia" in a much broader sense than adopted here.

Allopocockia rotundata Kraus

Allopocockia rotundata Kraus, 1954, Senckenberg. biol., 35: 336, figs. 75-78. ♂ HT (SMF) from Monte Cristo in the Metapan mountains, Dept. Santa Ana, El Salvador.

Chelogonobolus rotundatus: Loomis, 1968, Bull. U. S. Nat. Mus. 266: 78.

Loomis's generic allocation may be correct, but cannot be verified until the posterior gonopods of this species have been examined.

Allopocockia tylopus (Pocock)

Spirobolellus tylopus Pocock, 1908, Biol. Centr.-Amer., Diplopoda, p. 88, pl. 7, figs. 8a-d. ♂ and ♀types, formerly BMNH, now apparently lost, from "Tecpan" [? Dept. Chimaltenango], Guatemala.

Allopocockia tylopus: Brolemann, 1913, Bull. Soc. Ent. France, p. 478. – Keeton, 1960, Proc. Biol. Soc. Washington, 73: 133.

Genus **Arolus** Chamberlin

Arolus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 35. Type species: *A. purulanus* Chamberlin, by original designation.

A so-far monotypic genus endemic in Guatemala.

Arolus purulanus Chamberlin

Arolus purulanus Chamberlin, 1922, Proc. U. S. Nat. Mus. 60(8): 35, pl. 13, figs. 10, 11; pl. 14, figs. 1-7. ♂ HT (USNM) from Purula [= Purulhá], Dept. Baja Verapaz, Guatemala.

Allopocockia purulana: Kraus, 1954, Senckenb. biol. 35: 336. – Loomis, 1968, Bull. U. S. Nat. Mus., 266: 78.

Genus **Chelogonobolus** Carl

Chelogonobolus Carl, 1919, Rev. Suisse Zool., 27: 399. Type species: *Spirobolus nahuus* DeSaussure & Humbert, by original designation. – Keeton, 1960, Proc. Biol. Soc. Washington, 73: 133.

Two species referred here, the type from Guatemala and another (with considerable doubt), from ?Puebla, Mexico.

Chelogonobolus atriculus (Pocock)

Spirobolellus atriculus Pocock, 1908, Biol. Centr.-Amer., Diplopoda, p. 88, pl. 7, figs. 9a-c. Status of types unknown, presumed lost (not in BMNH), from Volcán de Agua, Dept. Sacatepequez, Guatemala.

Allopocockia atriculus: Kraus, 1954, Senckenb. biol. 35: 336.

Chelogonobolus atriculus: Keeton, 1960, Proc. Biol. Soc. Washington, 73: 137. – Loomis, 1968, Bull. U. S. Nat. Mus. 266: 78.

Chelogonobolus nahuus (Humbert & DeSaussure)

Spirobolus nahuus Humbert & DeSaussure, 1869, Rev. Mag. Zool. (2) 21: 154 – DeSaussure & Humbert, 1872, Mission scient. Mexique, Zool., (6)2: 86, pl. 4, fig. 21. Syntypes (fragments of several ♂♂) (MHNG) from "le Mexique; Sierra de Moyoapan (Cordillère orientale)."

Spirobolellus nahuus: Pocock, 1908, Biol. Centr.-Amer., Diplopoda, p. 88.

Chelogonobolus nahuus: Carl, 1919, Rev. Suisse Zool., 27: 401, figs. 32-39. – Keeton, 1960, Proc. Biol. Soc. Washington, 73: 134, figs. 1-7.

Loomis' generic allocation may be correct, but cannot be verified until the posterior gonopods of this species have been examined.

Genus **Schmidtolus** Chamberlin

Schmidtolus Chamberlin, 1953, American Midl. Nat. 50: 149. Type species: *S. chichivacus* Chamberlin, by original designation.

Two nominal species, endemic in Guatemala.

Schmidtolus chichivacus Chamberlin

Schmidtolus chichivacus Chamberlin, 1953, American Midl. Nat. 50: 149, figs. 27-29. Type specimens (FMNH) from Santa Elena and Chichivac, near Tecpan, Dept. Chimaltenango, Guatemala.

The selection of Chichivac as type locality by Loomis (1968: 78) should be confirmed by designation of a lectotype from the two type series (or holotype, which was not specified in the original description).

Schmidtolus parvior Chamberlin

Schmidtolus parvior Chamberlin, 1953, American Midl. Nat. 50: 150, figs. 30, 31. ♂ and ♀ syntypes (FMNH) from Volcán Tajumulco, Dept. San Marcos, Guatemala.

Family Typhlobolellidae Hoffman

Typhlobolellidae Hoffman, 1980, Classification of the Diplopoda, p. 78 (*nomen translatum ex* subfamily Typhlobolellinae Hoffman, 1969, Proc. Biol. Soc. Washington, 82: 178.

Genus **Ergene** Chamberlin

Ergene Chamberlin, 1943, Bull. Univ. Utah, 34(6): 4. Type species: *Ergene setosus* Chamberlin, by original designation (as genus of Cambalopsidae). – Hoffman, 1973, Fieldiana Zoology, 62:30.

A monotypic genus endemic in Tamaulipas and San Luis Potosi, Mexico.

Ergene setosa Chamberlin

Ergene setosus Chamberlin, 1943, Bull. Univ. Utah, 34(6): 5, figs. 3, 4. ♂ HT (USNM) from 19 miles south of Ciudad Victoria, Tamaulipas, Mexico, on Hy. 1.– Causey, 1971, Proc. Biol. Soc. Washington, 34: 271.

Ergene setosa: Hoffman, 1973, Fieldiana: Zool., 62: 30, figs. 1-4.

It is difficult to believe that the species illustrated under this name by Causey (1973, figs. 6,7) is actually *Ergene setosa.*

Genus **Morelene** Chamberlin

Morelene Chamberlin, 1943, Bull. Univ. Utah, 34(7): 10. Type species: *M. mundus* [*sic*!] Chamberlin, by original designation.

A monotypic genus endemic in Morelos, Mexico.

Morelene munda Chamberlin

Morelene mundus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 11, figs. 2, 3. ♂ HT (USNM) from Oaxtepec, Morelos, Mexico.

Genus **Reddellobus** Causey

Reddellobus Causey, 1973, Internat. Journ. Speleol. 6: 333. Type species: *R. troglobius* Causey, by original designation.

A monotypic genus endemic in Puebla, Mexico.

Reddellobus troglobius Causey

Reddellobus troglobius Causey, 1973, Internat. Journ. Speleol. 6: 334, figs. 1-5. ♂ HT (USNM?) from Grutas de Jonotla, 7 km SW of Cuetzalan, Puebla, Mexico. – Shear, 1986, Texas Mem. Mus. Speleol. Monogr. 1: 77.

Range: Known only from numerous sites, mostly caves, around Cuetzalan, Puebla (Shear, 1986: 77).

Genus **Typhlobolellus** Hoffman

Typhlobolellus Hoffman, 1969, Proc. Biol. Soc. Washington, 82: 178. Type species: *T. whiteheadi* Hoffman, by original designation.

Two species, endemic in central lowland Veracruz, Mexico.

Typhlobolellus fortinus Shear

Typhlobolellus fortinus Shear, 1974, Quad. Accad. Naz. Lincei, Probl. Att. Sci. Cult., 171(2): 251, figs. 14-19. ♂ HT (MCZ) from Fortin de las Flores, Veracruz, Mexico.

Typhlobolellus whiteheadi Hoffman

Typhlobolellus whiteheadi Hoffman, 1969, Proc. Biol. Soc. Washington, 69: 178, figs. 1-8. ♂ HT (USNM) from 0.8 miles west of Sontecomapan (ca. 11 miles north of Catemaco), Veracruz, Mexico.

Family Atopetholidae Chamberlin

Atopetholidae Chamberlin, 1918, Proc. Biol. Soc. Washington, 31: 00. – Hoffman & Orcutt, 1960, Proc. U.S. Nat. Mus., 111: 00 (revision).

Although this family was surveyed only few decades ago, it is again in urgent need of a thorough revision, as the previous treatment was based on far too little material and relied far too much on peripheral characters for definition of genera. Several years after its publication, I was able to study a number of diverse species and perceived some necessary changes which were embodied without comment in the 1980 "Classification". Many of these changes have been documented and discussed in a recent paper (Hoffman, 1998), which does not reduce the need for a revisionary treatment. It is entirely possible that even the four subfamilies here recognized will be altered or abolished, and without doubt many genera will be abandoned.

Subfamily Atopetholinae Chamberlin

Atopetholinae Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus. 111: 132 (*nomen translatum ex* family Atopetholidae Chamberlin, 1918).

Genus **Atopetholus** Chamberlin

Atopetholus Chamberlin, 1918, Proc. Biol. Soc. Washington, 37: 167.– Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus. 111: 133. Type species: *A. californicus* Chamberlin, by original designation.

?Hesperolus Chamberlin, 1918, Proc. Biol. Soc. Washington, 37: 170. Type species: *H. wheeleri* Chamberlin, by original designation. Synonymized by Hoffman, 1980.

Onychelus (nec sensu Cook, 1911) Verhoeff, 1938, Zool. Anz., 122: 274.

Orthichelus Chamberlin & Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 71: 7. Type species: *Onychelus phanus* Chamberlin, 1941. Synonymized by Hoffman & Orcutt, 1960.

About eight species, southern California, southern Nevada.

Atopetholus angelus Chamberlin

Atopetholus angelus Chamberlin, 1920, Proc. Biol. Soc. Washington, 39: 101. ♂ HT (MCZ) from Edendale suburb, Los Angeles, Los Angeles Co., California.

Atopetholus angelus: Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus., 111: 135, fig. 7a-d (redescription and gonopod illustrations from paratype).

Atopetholus barbaranus Chamberlin

Atopetholus barbaranus Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 168. ♂ HT (USNM) from Orcutt, Santa Barbara Co., California.

Atopetholus californicus Chamberlin

Atopetholus californicus Chamberlin, 1918, Proc. Biol. Soc. Washington, 37: 168; 1940, Pomona Coll. Journ. Ent. & Zool., 32: 82, fig. F. ♂ HT (MCZ) from Claremont, Los Angeles – San Bernardino counties, California. – Hoffman, 1998, Myriapodologica, 5: 66, figs. 1-3 (redescription of holotype).

Atopetholus carmelitus Chamberlin

Atopetholus carmelitus Chamberlin, 1940, Pomona Coll. Journ. Ent. & Zool., 32: 81, figs. C-E; 1941, Bull.Univ. Utah, 31(11): 30, figs. 3, 4. ♂ HT (USNM) from Hastings Reservation, Monterrey Co., California.

Atopetholus fraternus Chamberlin

Atopetholus fraternus Chamberlin, 1918, Proc. Biol. Soc. Washington, 37: 169. ♂ HT (MCZ) from Friant, Fresno Co., California.

Atopetholus michelbacheri (Verhoeff)

Onychelus michelbacheri Verhoeff, 1938, Zool. Anz., 122: 276, figs. 1-3. ♂♀STs (ZSBS) from Walker's Pass [ca. 6 mi NW of Freeman Jct], Kern Co., California.

Onychelus phanus Chamberlin, 1941, Bull. Univ. Utah, 31(12): 6, figs. 6, 7. ♂ HT (USNM) from 6 miles west of Freeman, Kern Co., California. Synonymized by Hoffman & Orcutt, 1960.

Orthichelus phanus: Chamberlin & Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 71: 8.

Atopetholus michelbacheri: Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus. 111: 138.

Orthichelus michelbacheri: Chamberlin, 1962, Proc. Biol. Soc. Washington, 75: 45.

Range: Aside from the type locality, the species has been recorded from vicinity of Mercury, northwest of Las Vegas, Nevada.

Chamberlin (1962) did not explain his decision to maintain *Orthichelus* as a valid monotypic genus, and the status of *michelbacheri* thus requires further clarification.

Atopetholus pearcei Chamberlin

Atopetholus pearcei Chamberlin, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 68: 6, fig. 3. ♂ HT (USNM) from Oildale, Kern Co., California.

Genus **Tidolus** Chamberlin

Tidolus Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 169. Type species: *Atopetholus parvus* Chamberlin, 1918, by original designation. – Hoffman, 1998, Myriapodologica, 5: 72 (description of type species, revalidation of generic status).

Monotypic, southern California.

Tidolus parvus Chamberlin, 1918, Proc. Biol. Soc. Washington, 37: 168. ♂ HT (MCZ) from Claremont,Los Angeles-San Bernardino Cos., California. – Hoffman, 1998, Myriapodologica, 5: 72, figs. 15-18.

Range: Aside from the type locality, the species is known from Topanga Canyon near Santa Monica, California.

Genus **Watichelus** Chamberlin

Watichelus Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 169. – Loomis, 1949, Journ. Washington Acad. Sci., 39: 241. Type species: *Onychelus smithi* Chamberlin, 1947, by original designation.

Six species, southern California, northern Baja California.

Watichelus cooki Loomis

Watichelus cooki Loomis, 1949, Journ. Washington Acad. Sci., 39: 243, figs. 5, 6. ♂ HT (USNM) from Descanso, Baja California Norte, Mexico.

Watichelus edentatus Loomis

Watichelus edentatus Loomis, 1949, Journ. Washington Acad. Sci., 39: 241, figs. 1, 2. ♂ HT (USNM) from between San Diego and El Centro, San Diego Co., California.

Watichelus emarginatus Loomis

Watichelus emarginatus Loomis, 1949, Journ. Washington Acad. Sci., 39: 243, figs. 7, 8. ♂ HT (USNM) from eight miles south of Tiajuana, Baja California Norte, Mexico.

Watichelus parallelus Loomis

Watichelus parallelus Loomis, 1949, Journ. Washington Acad. Sci., 39: figs. 9, 10. ♂ HT (USNM) from Chula Vista, San Diego Co., California.

Watichelus robustus Loomis

Watichelus robustus Loomis, 1949, Journ. Washington Acad. Sci., 39: 241, figs. 3, 4. ♂ HT (USNM) from Chula Vista, San Diego Co., California.

Watichelus smithi (Chamberlin)

Onychelus smithi Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 49, figs. 52, 53. ♂ HT (ANSP) from Murray Canyon, three miles north of Palm Springs, Riverside Co., California.

Watichelus smithi: Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 109.

ATOPETHOLINAE OF UNCERTAIN GENERIC POSITION

Atopetholus paroicus Chamberlin, 1941, Bull. Univ. Utah, 31(12): 7, fig. 5. ♂ HT (USNM) from Mountain Spring, San Diego Co., California.

Hesperolus wheeleri Chamberlin, 1918, Proc. Biol. Soc. Washington, 31: 169. Immature ♂ HT (MCZ) from the Santa Ynez Mountains, Santa Barbara Co., California.– Hoffman, 1998, Myriapodologica, 5: 66, figs. 4-6.

[Type species of **Hesperolus** Chamberlin, 1918, Proc. Biol. Soc. Washington, 31: 169.]

Subfamily Eurelinae Hoffman & Orcutt

Eurelinae Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus., 111: 117.

Genus **Centrelus** Cook

Centrelus Cook, 1911, Proc. U. S. Nat. Mus., 40: 154. Type species: *C. falcatus* Cook, by monotypy and original designation. – Hoffman, 1998, Myriapodologica, 5: 68.

Saussurobolus Carl, 1919, Rev. suisse zool., 27: 289. Type species: *Julus nietanus* DeSaussure, 1860, by original designation. Synonymized by Hoffman, 1980.

Eight species, Mexico.

Centrelus boreus (Loomis)

Saussurobolus boreus Loomis, 1966, Journ. Kansas Ent. Soc., 39: 521, figs. 10-12 ♂ HT (USNM) from Huasteca Canyon, near Monterrey, Nuevo León, Mexico.

Centrelus boreus: Hoffman, 1998, Myriapodologica, 5: 68.

Centrelus falcatus Cook

Centrelus falcatus Cook, 1911, Proc. U. S. Nat. Mus. 40: 155. ♂ HT (formerly USNM, apparently lost), from Guanajuato, Mexico.

Centrelus heteropygus (DeSaussure & Humbert)

Spirobolus heteropygus DeSaussure & Humbert, 1869, Rev. & Mag. Zool., p. 154; Miss. Sci. Mex. Centr. Amer., Zool., 6(2): 90, pl. IV, fig. 22. ♂♂ST (?MHNG) from Cuernavaca, Morelos, Mexico.

Cyclothyrophorus heteropygus: Pocock, 1908, Biol. Centr.-Amer., Diplopoda, p. 85. – Loomis, 1968, Bull. U. S. Nat. Mus. 266: 80.

Centrelus heteropygus: Hoffman, 1998, Myriapodologica, 5: 68.

Centrelus neglectus (Carl)

Spirobolus nietanus (in part): DeSaussure & Humbert, 1872, Miss. Sci. Mex. Amer. Centr. Zool., 6(2): 89.

Saussurobolus neglectus Carl, 1919, Rev. suisse Zool., 27: 391, figs. 17-22. ST (MHNG) from Cuernavaca, Morelos, Mexico.

Centrelus neglectus: Hoffman, 1998, Myriapodologica, 5: 68.

Centrelus nietanus (DeSaussure)

Julus nietanus DeSaussure, 1860, Mém. Soc. Phys. Genève, 15: 565 [=365!], pl. 5, figs. 33a-d. ♂♀Sts (MHNG) from Cuernavaca, Morelos, Mexico.

Cyclothyrophorus nietanus: Pocock, 1908, Biol. Centr.-Amer., Diplopoda, 84.

Saussurobolus nietanus: Carl, 1919, Rev. suisse Zool., 27: 390, fig. 16.

Centrelus nigrescens (Chamberlin)

Onychelus nigrescens Chamberlin, 1923, Proc. California Acad. Sci., (4) 12: 407, figs. 44-47. ♂ HT (CAS) from Coronados Island, Golfo de Mexico, northeast of Loreto, Baja California Sur, Mexico.

Atopetholus nigrescens: Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus. 111: 139.

Centrelus nigrescens: Hoffman, 1998, Myriapodologica, 5: 68.

Centrelus spinosus (Loomis)

Saussurobolus spinosus Loomis, 1968, Journ. Kansas Ent. Soc., 41: 388, figs. 7-10. ♂ HT (USNM) from Lopez Mateos monument on Highway 60, east of Iturbide, Nuevo León., Mexico.

Centrelus spinosus: Hoffman, 1998, Myriapodologica, 5: 68.

Centrelus vulvanus (Karsch)

Spirobolus vulvanus Karsch, 1881, Zeitschr. ges. Naturwiss. (3) 6: 55. ♂LT, ♂LPT, ♀LPT (ZMB 882), from "Puebla" [probably the city], Mexico.

Cyclothyrophorus vulvanus: Pocock, 1908, Biol. Centr.-Amer. Diplopoda, 86.

Cyclothyrophorus valvanus [*sic*]: Loomis, 1968, Bull.U. S. Nat. Mus. 266: 80.

Centrelus vulvanus: Hoffman, 1998, Myriapodologica 5: 68, figs. 7-10 (from lectotype).

Centrelus zacatecus (Chamberlin)

Arinolus zacatecus Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 51, figs. 59, 60. ♂ HT (ANSP9974) from Sierra Temperoso del Oro, Est. Zacatecas, Mexico.

Saussurobolus zacatecus: Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus. 111: 147.

Centrelus zacatecus: Hoffman, 1998, Myriapodologica, 5: 68.

Genus **Comanchelus** Hoffman & Orcutt

Comanchelus Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus., 111: 128. Type species: *C. hubrichti* Hoffman & Orcutt, by original designation. – Loomis, 1968, Proc. Biol. Soc. Washington, 81: 503.

Four species, Texas, Chihuahua.

Comanchelus camporum Loomis

Comanchelus camporum Loomis, 1968, Proc. Biol. Soc. Washington, 81: 503, figs. 9-11. ♂ HT (USNM) from 24 miles east of Llano, Llano Co., Texas.

Comanchelus chihuanus (Chamberlin)

Toltecolus chihuanus Chamberlin, 1947, Proc. Biol. Soc. Washington 60: 10, figs. 5-7. ♀ HT (USNM) from Cuidad Chihuahua, Chihuahua, Mexico.

Comanchelus chihuanus: Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus., 111: 128.

Comanchelus hubrichti Hoffman & Orcutt

Comanchelus hubrichti Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus., 111: 129, figs. 3, 6a-d. ♂ HT (USNM) from 3.3 miles northeast of Pandale, Val Verde Co., Texas.

Range: Central Texas (Map: Hoffman & Orcutt 1960, fig. 3).

Comanchelus lobatus Loomis

Comanchelus lobatus Loomis, 1968, Proc. Biol. Soc. Washington, 81: 504, figs. 12-14. ♂ HT (USNM) from San Antonia, Bexar Co., Texas.

Genus **Eurelus** Chamberlin

Eurelus Cook, 1911, Proc. U. S. Nat. Mus. 40: 161. Type species: *E. soleatus* Cook, by original designation. – Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus., 111: 118.

Removed from genus: *Eurelus tancitares* Chamberlin, 1941 (see *Hiltonius mexicanus*, p.43).

One species, southern Texas.

Eurelus soleatus Cook

Eurelus soleatus Cook, 1911, Proc. U. S. Nat. Mus., 40: 153. ♂ HT (USNM, lost), from Falfurrias, Brooks Co., Texas. – Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus. 111: 119, figs. 1a-c, 3, 4a-f.

Eurelus proximus Chamberlin & Mulaik, 1941, Journ. New York Ent. Soc., 49: 62. ♂ HT (USNM?) from Edinburg, Hidalgo Co., Texas.

Toltecolus parvunguis Hoffman, 1949, Chicago Acad. Sci. Nat. Hist. Misc., 46: 1, figs. A, B. ♂ HT (USNM) from Frio Co., Texas.

Range: Coastal Plain of Texas, between the Colorado River and Rio Grande (map: Hoffman & Orcutt, 1960, fig. 3).

Genus **Mannobolus** Loomis

Mannobolus Loomis, 1968, Proc. Biol. Soc. Washington, 8!: 505. Type species: *M. peninsularis* Loomis, by original designation.

One species, Baja California, Mexico.

Mannobolus peninsularis Loomis

Mannobolus peninsularis Loomis, 1968, Proc. Biol. Soc. Washington, 81: 507, figs. 15-18. ♂ HT (USNM) from Comondu, Baja California Sur, Mexico.

Genus **Toltecolus** Chamberlin

Toltecolus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 27. Type species: *T. garcianus* Chamberlin, by original designation.

Centrelus (in part, not sensu Cook 1911): Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus., 111: 124.

Two species, Texas; Nuevo León.

Toltecolus fluvialis (Loomis)

Centrelus fluvialis Loomis, 1968, Proc. Biol. Soc. Washington, 81: 501, figs. 6-8. ♂ HT (USNM) from Comstock, Val Verde Co., Texas.

Toltecolus fluvialis: Hoffman, 1998, Myriapodologica, 5: 74 (not indicated as new combination).

Toltecolus kerrensis (Chamberlin & Mulaik)

Eurelus kerrensis Chamberlin & Mulaik, 1941, Journ. New York Ent. Soc., 49: 61. ♂ HT (USNM) from “Raven Ranch”, Kerr Co., Texas.

Toltecolus garcianus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 27, figs. 30-33. ♂ HT (USNM) from Garcia, Nuevo León, Mexico. Synonymized by Hoffman & Orcutt, 1960.

Centrelus kerrensis: Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus., 111: 124, figs. 3, 5a-c.

Toltecolus kerrensis: Hoffman, 1998, Myriapodologica, 5: 74 (not indicated as new combination).

Range: Central and western Texas, Nuevo León (map: Hoffman & Orcutt, 1960, fig. 3).

Genus **Uvaldia** Loomis

Uvaldia Loomis, 1968, Proc. Biol. Soc. Washington, 81: 499. Type species: *U. intersecta* Loomis, by original designation.

One species, Texas.

Uvaldia intersecta Loomis

Uvaldia intersecta Loomis, 1968, Proc. Biol. Soc. Washington, 81: 500, figs. 1-5. ♂ HT(USNM) from Uvalde, Uvalde Co., Texas.

Subfamily Onychelinae Hoffman & Orcutt

Onychelinae Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus., 111: 142 [the name Onychelidae Verhoeff, 1938, was based on a species in a different subfamily, and is a synonym of Atopetholinae].

Genus **Onychelus** Cook

Onychelus Cook, 1904, Harriman Alaska Exped., 8: 68. Type species: *O. obustus* Cook, by original designation. – Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus., 111: 142. – Shelley, 1998, Myriapodologica, 5: 112.

Gosichelus Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 168. Type species: *Onychelus medolus* Chamberlin, 1941, by original designation. Synonymized by Hoffman & Orcutt, 1960.

One species, California and adjacent Arizona.

Onychelus obustus Cook

Onychelus obustus Cook, 1904, Harriman Alaska Exped., 8: 68. – Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus. 111: 142, fig. 8a-b. ♂ HT (USNM) from the Colorado Desert, Riverside Co., California. – Shelley, 1998, Myriapodologica, 5: 113, figs. 1-5.

Onychelus medolus Chamberlin, 1941, Bull. Univ. Utah, 31(11): 13, figs. 17, 18. ♂ HT (USNM) from Olberg, Pinal Co., Arizona. Synonymized by Shelley, 1998.

Hiltonius thebanus Chamberlin, 1941, Bull. Univ. Utah, 31(11): 8, fig. 7. ♀ HT (USNM) from Theba (10 miles west of Gila Bend on US 80), Maricopa Co., Arizona. Synonymized by Shelley, 1998.

Onychelus jaegeri Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 50, figs. 54, 55. ♂ HT (ANSP) from Indio Mudhills, ten miles northeast of Palm Springs, Riverside Co., California.

Onychelus thebanus: Shelley & Bauer, 1997, Great Basin Natur., 57: 231.

Keeton (op. cit., p. 113, footnote) treated this species from a female specimen considered by him to be conspecific with the female holotype, which, apparently, he did not examine. Having seen the holotype, Shelley & Bauer (1997: 231) considered it to represent a species in the atopetholid genus *Onychelus,* later referred by Shelley to *O. obustus*.

Subfamily Arinolinae Hoffman & Orcutt

Arinolinae Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus., 111: 147 (synopsis).

Genus **Arinolus** Chamberlin

Arinolus Chamberlin, 1940, Pomona College Journ. Ent. And Zool., 32: 81. Type species: *A.torynophor* Chamberlin, by original designation. – Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus. 111: 149.

Ten nominal species, Arizona and adjacent southern parts of Nevada and California.

Arinolus apachellus Chamberlin

*Arinolus apachellus*Chamberlin, 1941, Bull. Univ. Utah, 31(11)): 10, figs. 12-14. ♂ HT (USNM) from "Covered Wells" (=Quijotoa), Pima Co., Arizona. – Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus., 111: 154, figs. 10a-e.

Range: Southwestern Arizona, south of the Gila River.

Arinolus chiricahuanus Chamberlin

*Arinolus chiricahuanus*Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 50, figs. 56-58. ♂ HT (ANSP) from White Tail Canyon, Chiricahua Mountains, Cochise Co., Arizona.

Arinolus citrinus Hoffman & Orcutt

Arinolus citrinus Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus. 111: 155, figs. 11a-d. ♂ HT (USNM) from Bear Canyon, Mount Lemmon, Pima Co., Arizona.

Arinolus dentatus (Cook)

Onychelus dentatus Cook, 1911, Proc. U. S. Nat. Mus. 40: 158. ♀ HT (formerly USNM, now lost), from Fort Huachuca, Cochise Co., Arizona.

Onychelus suturatus Cook, 1911, Proc. U. S. Nat. Mus. 40: 159. ♀ HT(formerly USNM, now lost), from Fort Huachuca, Cochise Co., Arizona. Synonymized by Loomis (1950).

Arinolus dentatus: Loomis, 1950, Journ. Washington Acad. Sci. 40: 164.

Arinolus hospes (Cook)

Onychelus hospes Cook, 1911, Proc. U. S. Nat. Mus. 40: 157. Imm. ♀ HT (formerly USNM, now lost), from Tucson, Pima Co., Arizona.

Arinolus hospes: Loomis, 1950, Journ. Washington Acad. Sci. 40: 164.

Arinolus hopinus Chamberlin

Arinolus hopinus Chamberlin, 1941, Bull. Univ. Utah, 31(11): 12, fig. 16. ♂ HT (USNM), from 16 miles east of Tucson, Pima Co., Arizona.

Synonymized with *A. hospes* by Loomis (1950), perhaps correctly.

Arinolus latus Loomis

Arinolus latus Loomis, 1953, Journ. Washington Acad. Sci. 43: 418, figs. 10-12. ♂ HT (USNM) from Antelope Valley, between Lancaster and Palmdale, Los Angeles Co., California.

Arinolus nevadae Chamberlin

Arinolus nevadae Chamberlin, 1962, Proc. Biol. Soc. Washington, 75: 54, figs. 1-3. ♂ HT (USNM) from the "Nevada Test Area", northwest of Las Vegas, Nye Co., Nevada.

Arinolus nogalanus Chamberlin

Arinolus nogalanus Chamberlin, 1941, Bull. Univ. Utah, 31(12): 11, fig. 15. ♂ HT (USNM) from Nogales, Santa Cruz Co., Arizona.

Arinolus pimus Chamberlin

Arinolus pimus Chamberlin, 1941, Bull. Univ. Utah, 31(12): 12. ♀ HT (USNM) from Litchfield Park, Maricopa Co., Arizona.

Arinolus sequens Chamberlin

Arinolus sequens Chamberlin, 1962, Proc. Biol. Soc. Washington, 62: 53, figs. 4, 5. ♂ HT (USNM) from the "Nevada Test Area", northwest of Las Vegas, Nye Co., Nevada.

Arinolus torynophor Chamberlin

Arinolus torynophor Chamberlin, 1940, Pomona College Journ. Ent. and Zool., 32: 81, figs. A-C.♂ HT(USNM) from Fish Creek, 10 miles east of Tortilla Flat, Maricopa Co., Arizona. – Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus., 111: 152, figs. 10a, b.

Genus **Piedolus** Chamberlin

Piedolus Chamberlin, 1930, Pan-Pacific Ent., 6: 117. Type species: *P. utus* Chamberlin, by original designation.

One species, southwestern Utah.

Piedolus utus Chamberlin

Piedolus utus Chamberlin, 1930, Pan-Pacific Ent., 6: 118, 2 unnumbered figures. ♂ HT (USNM) from St. George, Washington Co., Utah.

Range: Recorded also from Panamint Springs, Inyo Co., California (Shelley & Bauer, 1997).

Genus **Scobinomus** Loomis

Scobinomus Loomis, 1953, Journ. Washington Acad. Sci., 43: 420. Type species: *S. serratus* Loomis, by original designation.

One species, northernmost Baja California.

Scobinomus serratus Loomis

Scobinomus serratus Loomis, 1953, Journ. Washington Acad. Sci. 43: 420, figs. 13-17. ♂ HT (USNM) from 14 miles north of Ensenada, Est. Baja California Norte, Mexico. – Hoffman & Orcutt, 1960, Proc. U. S. Nat. Mus., 111: 162, figs. 12a-c.

Range: Vicinity of Ensenada, Baja California Norte.

Genus **Tarascolus** Chamberlin

Tarascolus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 25. Type species: *T. bolivari* Chamberlin, by original designation.– Loomis, 1976, Florida Entom., 59: 290, discussion and key to species.

Three species, southern Mexico.

Tarascolus bolivari Chamberlin

Tarascolus bolivari Chamberlin, 1943, Bull. Univ. Utah, 34(7): 26, figs. 46-50. ♂ HT (USNM) from Zitacuaro, Michoacán, Mexico.

Tarascolus clarus Chamberlin

Tarascolus clarus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 26, fig. 51. ♂ HT (USNM) from Santa Rosa, Distrito Federal, Mexico.

Tarascolus reflexus Loomis

Tarascolus reflexus Loomis, 1976, Florida Entom., 59: 291, figs. 7, 8. ♂ HT (FSCA) from 21 km northeast of Mexico City (La Marquesa), Mexico, Mexico.

ATOPETHOLIDAE OF UNCERTAIN SUBFAMILY POSITION

Genus **Cyclothyrophorus** Pocock

Cyclothyrophorus Pocock, 1908, Biol. Centr.-Amer., Diplopoda, p. 83. Type species: *C. salvini* Pocock, by original designation.

One species, central western Mexico.

Cyclothyrophorus salvini Pocock, 1908, Biol. Centr.- Amer. Diplopoda, p. 83, pl. VII, figs. 6a-d. ♂HT (formerly BMNH, apparently lost), from Amula, Guerrero, Mexico. – Hoffman, 1998, Myriapodologica, 5: 70, figs. 11-14.

Range: Aside from the type locality, known also from 19 mi. northeast of Colima, Colima, Mexico.

Family Spirobolellidae Brolemann

Spirobolellidae Brolemann, 1913, Bull. Soc. Ent. France for 1913: 477; 1914, Ann. Soc. Ent. France, 83: 30.

Genus **Spirobolellus** Pocock

Spirobolellus Pocock, 1894, in: Weber, Zool. Ergebn. Reise Niederl. Ost-Ind. 3: 398. Type species: *S. chrysodirus* Pocock, by original designation.

Microspirobolus Silvestri, 1898, An. Mus. Nac. Buenos Aires 6: 75. Type species: *M. pulchellus* Silvestri, by monotypy.

Spirobolinus Silvestri, 1898, Boll. Mus. Zool. Anat. Comp. Torino 13(324): 8. Type species: *S. luciae* Silvestri, 1898, by subsequent designation of Hoffman, 1955.

Barrobolus Chamberlin, 1925, Proc. Biol. Soc Washington, 38: 41. Type species: *B. grammicus* Chamberlin, by original designation.

Aporobolus Loomis, 1934, Smithsonian Misc. Colls 89(14): 23. Type species: *A. crusoi* Loomis, by original designation.

About 80 nominal species, East Indies, Micronesia, New Caledonia, eastern Australia, Panama, northern South America, Greater Antilles (except Jamaica, a remarkable exception!).

Inclusion of *Microspirobolus* within *Spirobolellus* (proposed in my 1969 paper on *Typhlobolellus* and continued in the "Classification" [1980: 78]) has been done with considerable diffidence inasmuch as the gonopod characters of both *Spirobolellus chrysodirus* and *Microspirobolus pulchellus* are still unknown. However, since with very few exceptions the numerous species adequately described in *Spirobolellus* from the East Indies and Oceania cannot be readily separated from the numerous Neotropical species named in *Microspirobolus*, the assumption is made that the two type species will fall into the same category.

The foregoing list of generic synonyms includes only those names which have been based upon New World species.

Spirobolellus baracoa Pérez-Asso

Spirobolellus baracoa Pérez-Asso, 1998, Caribbean Journ. Sci., 34: 76, figs. 5A-C, 8 I, 9. ♂ HT (MNHNCu) from Yunque de Baracoa, Prov. Guantánamo, Cuba.

Range: Several localities in Prov. Guantánamo, Cuba (map, Pérez-Asso, 1998, fig. 9)

Spirobolellus belonanus (Chamberlin), new combination!

Microspirobolus belonanus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 207. ♂ HT (MCZ) from Belona, Oriente Prov., Cuba; 1922, Proc. U. S. Nat. Mus., 61(10): pl. 4, figs. 3, 4.

Microspirobolus conspicillatus Loomis, Bull. Mus. Comp. Zool. 82: 454, fig. 14a-c. ♂ HT (MCZ) from seacoast below Pico Turquino, Prov. Santiago de Cuba, Cuba. Synonymized by Pérez-Asso, 1998.

Microspirobolus undosus Loomis, 1938, Bull. Mus. Comp. Zool., 82: 452, figs. 13a-c. ♂ HT (MCZ) from Pico del Turquino, near summit, Prov. Santiago de Cuba, Cuba. Synonymized by Pérez-Asso, 1998.

Microspirobolus mucronatus Loomis, 1938, Bull. Mus. Comp. Zool., 82: 456, figs. 15a-b. ♂ HT (MCZ) from Sierra del Cobre, 3000-3800 ft., Oriente Prov., Cuba. Synonymized by Pérez-Asso, 1998.

Range: Provs. Santiago de Cuba and Guantanamo,Cuba (map, Pérez-Asso, 1998, fig. 9).

Spirobolellus concinnus (Loomis), new combination!

Microspirobolus concinnus Loomis, 1936, Bull. Mus. Comp. Zool. 80: 45, fig. 19a-c. ♂ HT (USNM) from Morne Brigand, near Bayeux, Haiti.

Spirobolellus dorsetti (Loomis), new combination!

Microspirobolus dorsetti Loomis, 1934, Smithsonian Misc. Colls., 89(14): 22, fig. 11a-b. ♂ HT (USNM) from near Roadtown, Tortola.

Spirobolellus eremus (Chamberlin)

Microspirobolus eremus Chamberlin, 1922, Proc. U. S. Nat. Mus., 61(10): 12, pl. 4, figs. 7-10. ♂ HT (MCZ) from Soledad, Habana Prov., Cuba.

Spirobolellus eremus: Pérez-Asso, 1998, Caribbean Journ. Sci., 34: 68, figs. 1A-C, 8A, 9.

Range: Central Cuba (map, Pérez-Asso, 1998, fig. 9)

Spirobolellus erythrotermus (Loomis), new combination!

Microspirobolus erythrotermus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 43, fig. 18a-b. ♂ HT (USNM) from Le Brande, Haiti.

Spirobolellus escambray Pérez-Asso

Spirobolellus escambray Pérez-Asso, 1998, Caribbean Journ. Sci., 34: 78, figs. 6A-C, 8D-E, 9. ♂ HT (MNHNCu) from Mayarí, Sierra del Escanbray, Prov. Cienfuegos, Cuba.

Range: Central Cuba, Prov. Cienfuegos (map, Pérez-Asso, 1998, fig. 9).

Spirobolellus esulcatus (Loomis), new combination!

Microspirobolus esulcatus Loomis, 1936, Bull. Mus. Comp. Zool. 80: 41, fig. 17a-d. ♂ HT (USNM) from Morne Brigand, near Bayeux, Haiti.

Spirobolellus fontis (Chamberlin), new combination!

Microspirobolus fontis Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 208. ♂ HT (MCZ) from San Diego de los Baños, Pinar del Rio Prov., Cuba; 1922, Proc. U. S. Nat. Mus., 61(10): pl. 4, figs. 1, 2.

Spirobolellus furcianus (Loomis), new combination!

Microspirobolus furcianus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 48, fig. 20a-b. ♂HT (MCZ) from Mt. Noir, 6100 ft., near Furcy, Haiti.

Spirobolellus grammicus (Chamberlin), new combination!

Barrobolus grammicus Chamberlin, 1925, Proc. Biol. Soc. Washington, 38: 41. ♂HT (MCZ) from Barro Colorado Island, Canal Zone, Panama.

Microspirobolus grammicus: Loomis, 1964, Fieldiana Zoology, 47: 115, fig. 12A-B.

Spirobolellus instratus (Loomis), new combination!

Microspirobolus instratus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 47, fig. 16a-c. ♂ HT(MCZ) from Monte Quita Espuela, 1000-3000 ft., Republica Dominicana.

Spirobolellus insularis (Silvestri), new combination!

Microspirobolus insularis Silvestri, 1908, Bull. American Mus. Nat. Hist., 24: 572, figs. VII, 1-2. ?ST (AMNH) from Utuado, Puerto Rico .– Loomis, 1941, Bull. Mus. Comp. Zool., 88: 42. – Chamberlin, 1950, Proc. Biol. Soc. Washington, 63: 150.

Spirobolellus lineatus (Chamberlin), new combination!

Microspirobolus lineatus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 209. ♂ HT (MCZ) from Diquini, Haiti; 1922, Proc. U. S. Nat. Mus., 61(10): pl. 4, figs. 5, 6 (gonopods illustrated).

Range: Recorded by Loomis (1936: 47) also from Kenscoff and Carrefour, Haiti.

Spirobolellus marmoratus (Silvestri), new combination!

Microspirobolus marmoratus Silvestri, 1909, Bull. American Mus. Nat. Hist., 24: 572, figs. VI, 1-6. ?ST (AMNH) from Utuado, Puerto Rico.

Range: Recorded from Maricao Forest (Loomis, 1941: 42) and Villalba (Chamberlin, 1950: 151), Puerto Rico.

Spirobolellus mediolus (Chamberlin), new combination!

Microspirobolus mediolus Chamberlin, 1950, Proc. Biol. Soc. Washington, 63: 151, figs. 4, 5. ♂ HT (USNM) from Maricao Insular Forest, north of San Germán, Puerto Rico.

Spirobolellus mimus (Chamberlin)

Microspirobolus mimus Chamberlin, 1922, Proc. U. S. Nat. Mus., 61(10): 12, pl. 5, figs. 4-6. ♂ HT (USNM) from San Diego de los Baños, Pinar del Rio Prov., Cuba. – Loomis, 1938, Bull. Mus. Comp. Zool., 82:452, figs.12-a-c.

Spirobolellus mimus: Pérez-Asso, 1998, Caribbean Journ. Sci., 34: 74, figs. 4A-C, 8B-C, 9.

Range: Western Cuba, Prov. Pinar del Rio (map, Pérez-Asso, 1998, fig. 9).

Spirobolellus pinarensis Pérez-Asso

Spirobolellus pinarensis Pérez-Asso, 1998, Caribbean Journ. Sci., 34: 80, figs. 7A-C, 8J-K, 9. ♂HT (MNHNCu) from Mil Cumbres, Prov. Pinar del Rio, Cuba.

Range: Type locality only (map, Pérez-Asso, 1998, fig. 9).

Spirobolellus pullus (Loomis), new combination!

Microspirobolus pullus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 46, figs. 15a-d. ♂ HT (MCZ) from Monte Quita Espuela, 1000-3000 ft., Republica Dominicana.

Spirobolellus richmondi (Chamberlin), new combination!

Microspirobolus richmondi Chamberlin, 1922, Proc. U. S. Nat. Mus., 61(10): 13; pl. 5, figs. 1-3. ♂ HT (USNM) from "El Yunque", ca. 7 km west of Fajardo, Puerto Rico.

Spirobolellus sigillatus (Loomis), new combination!

Microspirobolus sigillatus Loomis, 1934, Smithsonian Misc. Colls., 89(14): 20, figs. 10a-b. ♂ HT(USNM) from Morne Pilboreau, above Ennery, Haiti.

Range: Also recorded from Monte Diego de Campo, Cordillera Setentrional, Republica Dominicana.

Spirobolellus signatus (Loomis), new combination!

Microspirobolus signatus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 42, figs. 13a-c. ♂ HT (MCZ) from Monte Diego de Campo, 3000-4000 ft., Cordillera Setentrional, Republica Dominicana.

Spirobolellus tenuipes (Loomis), new combination!

Microspirobolus tenuipes Loomis, 1941, Bull. Mus. Comp. Zool., 88: 44, figs. 14a-b. ♂ HT (MCZ) from Loma Rucilla and mountains northward, 5000-8000 ft., Cordillera Setentrional, Republica Dominicana.

Spirobolellus toronus (Chamberlin), new combination!

Microspirobolus toronus Chamberlin, 1950, Proc. Biol. Soc. Washington, 63: 151, figs. 6, 7. ♂ HT (USNM) from Toro Negro, north of Villalba, Puerto Rico.

Spirobolellus trifasciatus (Loomis), new combination!

Microspirobolus trifasciatus Loomis, 1964, Fieldiana: Zool., 47: 115, figs.12C-D. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panama.

Family Rhinocricidae Brolemann

Rhinocricidae Brolemann, 1913, Bull. Soc. Entom. France for 1913: 477. – Hoffman, 1980, Classification of the Diplopoda, p. 78.

This family is perhaps the most clearly defined of the order, and the one for which the generic level classification is least known. Many generic names have been proposed on the basis of trivial peripheral characters, and some based on gonopod characters may only reflect random homoplasic reduction trends. The situation has been discussed in my 1980 summary, and again in connection with *Thyroproctus* in 1998. After much vacillation, I decided the best option for this account is a subjective combination of registering genera which appear to be well-founded, plus impartially listing other existing generic names pending comprehensive study of the entire family.The result is satisfactory only as an entrée into the literature as it includes “genera” based on gonopod characters as well as others which require a special category of “species of uncertain generic position” - many of these obviously merit generic status.The indulgence of the user is again solicited.

30 nominal genera, Middle and South America, Indopacific region.

Several species have been attributed to North American localities.These records are patently erroneous, and one name has been associated with an older synonym based on a Mexican species (see *Eurhinocricus fissus* below). The other nameshave been carried under *Anadenobolus* in the following pages since they may be valid species based on mislabeled material from somewhere in Middle America.

Genus **Alcimobolus** Loomis

Alcimobolus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 56. Type species: *A. angustipes* Loomis, by original designation.

One species, Hispaniola.

Synonymized with *Cubocricus* by Chamberlin (1947).

Alcimobolus domingensis (DeSaussure & Humbert)

Julus haitensis (nec Gervais, 1847) DeSaussure, 1860, Mém. Soc. Phys. Hist. Nat. Genève, 15: 363.

Spirobolus domingensis DeSaussure & Humbert, 1872, Miss. Sci. Mexique, Zool., (6) 2: 176. 2♂ ST (?MHNG) labeled only “St-Domingue”.

Rhinocricus domingensis: Pocock, 1894, Journ. Linnean Soc. London, 24: 495.

[Not *Nesobolus domingensis*: Loomis, 1936, Bull. Mus. Comp. Zool. 80: 61.]

Alcimobolus angustipes Loomis, 1936, Bull. Mus. Comp. Zool., 80: 57, figs. 23a, b. ♂ HT (MCZ) from San Lorenzo, Samana Bay, Republica Dominicana. Synonymized by Mauriès & Hoffman, 1998.

Alcimobolus domingensis: Mauriès & Hoffman, 1998, Myriapodologica, 5: 99, figs.3, 4.

Range: Recorded from numerous localities in the Dominican Republic by Loomis (1941).

Genus **Anadenobolus** Silvestri

Anadenobolus Silvestri, 1897, Ann. Mus. Civ. Stor. Nat. Genova, 38: 651.Type species: *Spirobolus politus* Porat, 1888, by original designation. – Mauriès, 1980, Bull. Mus. Natn. Hist. Nat. Paris,(4) 2 (A4):1088.

Cubobolus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 206.Type species: *C. beliganus* Chamberlin, by original designation.Synonymized by Loomis, 1938

Orthocricus Velez, 1963, Caribbean Journ. Sci., 3: 209. Type species: *Julus arboreus* DeSaussure, by original designation.**New synonymy**!

About 60 nominal species, congeneric with the type species or otherwise closely related,throughout Middle and South America.

Although the holotype of *S. politus* (from Antigua) is a female, Mauriès (1980) made the reasonable assumption that the species is the same as the dominant rhinocricid on the adjacent island of Guadeloupe and thus brought *Anadenobolus* back into the mainstream of rhinocricid taxonomy as the third oldest available generic name.This action associated *Anadenobolus* with a posterior gonopod of characteristic form and wide distribution throughout the Neotropical region.As Mauriès demonstrated in Guadeloupe material, there is some variation in gonopod structure even on a small island, and almost certainly some (?many) of the species named from the Lesser Antilles by Chamberlin in 1918 will prove to be synonyms of a few much earlier names.At least one species (*monilicornis* Porat) is known to be widespread by commerce throughout the West Indies, and doubtless several related species may likewise be anthropochoric, gathering synonyms as they were found on different islands and described as new chiefly on geographic grounds. The status of nominal species described from such minute islands as Union and Carriacou requires special attention as it seems improbable that they would generate endemic species.

Although neither of us examined the male holotype of *Cubobolus beliganus*, I think that Loomis was correct to consider that genus superfluous.The major distinctions advanced by Chamberlin (although not emphasized by him) were the occurrence of four antennal sensory cones and the absence of scobinae,both now considered to be character-states of only specific value. The verbal description of gonopod structure offers nothing different from the form typical of most species of *Anadenobolus*.

Orthocricus was justifiably proposed to accomodate some of the West Indian species left "orphaned" by my 1960 restriction of *Rhinocricus* to a few Cuban forms.I believe that the type species *arboreus* is congeneric with *Anadenobolus politus,* however.

A number of species known from Cuba and Hispaniola have distinctive gonopod structure and amply merit generic status.A start has been made in this direction by Peréz-Asso (1998) for the Cuban fauna; his initiative must now be extended to that of the adjacent island.I have gone so far as to refer them to the limbo of "Rhinocricidae of uncertain status" at the end of this section. Further, the most superficial examination of published drawings suggests that at least two, perhaps three, distinct generic taxa from Mexico and Central America are combined here under *Anadenobolus.* A number of species described from females are also included under this generic name for no better reason than their geographic origin.All these anomalies must be sorted out by some future student of the family.

Anadenobolus anguinus (Pocock), new combination

Rhinocricus anguinus Pocock, 1894, Journ. Linnean Soc. London,. 24: 502. ♂ HT (BMNH) from St. Lucia, without further locality.

Anadenobolus angusticollis (Karsch), new combination

Spirobolus (Rhinocricus) angusticollis Karsch, 1881, Zeitschr. Ges. Naturw. (3) 6: 70. ♀♀ ST (ZMB) from "Puebla" (probably the city), Mexico.

Anadenobolus aposematus (Pocock), new combination

Rhinocricus aposematus Pocock, 1907, Biol. Centr.-Amer., Diplopoda, p. 63, pl. VI, figs. 4a-e. ♀ HT (BMNH) from Santa Clara, Prov. Santa Clara, Costa Rica.

Anadenobolus approximans (Hoffman), new combination

Rhinocricus simulans Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 39, figs. 33-35. ♂ HT (ANSP) from Nicaragua, without further locality. Preoccupied by *Rhinocricus simulans* Chamberlin, 1922, Proc. U. S. Nat. Mus. 60(8): 22.

Rhinocricus approximans Hoffman, 1950, Proc. Biol. Soc. Washington, 63: 69 (25 May). Replacement name for *R. simulans* Chamberlin, 1947.

Rhinocricus simulatus Chamberlin, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 68: 6 (12 October). Replacement name for *R. simulans* Chamberlin, 1947.

Anadenobolus arboreus arboreus (DeSaussure), new combination

Julus arboreus DeSaussure, 1859, Linnaea Entom., 13: 331; 1860, Mém. Soc. Phys. Hist. Nat. Genève, 15: 365, pl. IV, figs. 28a-e. ♂♀ ST (MNHG, ZMB) from "Les Antilles. . .á l'île de St-Thomas".

Rhinocricus arboreus: Pocock, 1894, Journ. Linnean Soc. London, 24: 493, pl. 38, fig. 4.

Orthocricus arboreus arboreus: Vélez, 1963, Caribbean Journ. Sci., 3: 209.

Rhinocricus (Rhinocricus) gisléni Verhoeff, 1941, Lunds Univ. Årsskr. [N.F., 2] 36(17): 9, figs. 14-16. ♂ ?HT (ZSBS) from St. Thomas, U. S. Virgin Islands. **New Synonymy**!

Range: U. S. Virgin Islands: St. Thomas, St. John; British Virgin Islands: Tortola; Puerto Rico: southern and eastern; St. Croix; Culebra. ?Antigua (Pocock; requires verification).

Anadenobolus arboreus gundlachi (Karsch), new combination

Spirobolus arboreus variety *gundlachi* Karsch, 1881, Zeitschr. Ges. Naturw., 54: 9. ♂♀ ST (ZMB) labeled only "Portorico" [Karsch quoted "Aracibo" and "Vega Baja" from a letter written by Dr. J. Gundlach, the collector].

Rhinocricus arboreus gundlachi: Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 197.

Range: North central Puerto Rico: Arecibo, Vega Baja, Manati, El Yunque, Pueblo Viejo.

Anadenobolus arboreus krugi (Karsch), new combination

Spirobolus arboreus variety *Krugii* Karsch, 1881, Zeitschr. Ges. Naturwiss., 54: 9. ♂♀ ST (ZMB) labeled only "Portorico" [Karsch mentioned "Mayaguez" for this form].

Rhinocricus arboreus krugii: Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 197.

Range: Western end of Puerto Rico.

The status of this and the preceeding taxon as subspecies in the modern, allopatric, sense remains to be established.

Anadenobolus atoyacus Pocock, new combination

Rhinocricus atoyacus Pocock, 1907, Biol. Centr.-Amer. Diplopoda, p. 65, pl. VI, figs. 8a-c. ♂ HT (BMNH) from Atoyac, Vera Cruz, Mexico.

Anadenobolus aurocinctus (Pocock), new combination.

Rhinocricus aurocinctus Pocock, 1907, Biol. Centr.-Amer., Diplopoda, p. 62, pl. VI, figs. 1a-h. ♂ HT (BMNH) from Milpas, Durango, Mexico.

Anadenobolus aztecus (DeSaussure), new combination

Julus aztecus DeSaussure, 1859, Linnea Entom., 13: 331; 1860, Mém. Soc. Phy. Hist. Nat. Geneve, 15: 338, figs. 29a-d. ♂♀ ST (MHNG) from "les partes chaudes du Mexique, á Vera Cruz, á Cordova, á Orizaba, etc."

Rhinocricus aztecus: Pocock, 1907, Biol. Centr.-Amer., Diplop. p. 68.

Anadenobolus brevicollis (Voges)

Spirobolus brevicollis Voges, 1878, Zeitschr. Wiss. Zool., 31: 191.♂♀ ST (originally in the University of Göttingen, present status unknown), from "Misatlan, Mexico", presumably a variant spelling for Mazatlan, Guerrero.

Rhinocricus brevicollis: Pocock, 1907, Biol. Centr.-Amer., Diplop., p. 69.

Anadenobolus bruesi (Chamberlin), new combination

Rhinocricus bruesi Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 203. F? HT (MCZ) labeled only "Jamaica" without further information.

Anadenobolus chamberlini (Schubart), new combination

Rhinocricus centralis Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 21, pl. 10, figs. 4-6. ♂ HT (USNM) from "Costa Rica" without further locality. Preoccupied by *Rhinocricus centralis* Carl, 1912, Rev. suisse Zool., 20: 176.

Rhinocricus chamberlini: Schubart, 1951, An. Acad. Brasileira Cienc., 23: 273.

Anadenobolus chazaliei (Brolemann), new combination

Rhinocricus chazaliei Brolemann, 1900, Mém. Soc. zool. France, 13: 93, pl. 6, figs. 8-13. ♂ HT (MNHP) from "Martinique" without further indication.

Anadenobolus chichen (Chamberlin), new combination

Rhinocricus chichen Chamberlin, 1953, American Midl. Nat., 50: 145, figs. 13, 14. ♂ HT (FMNH) from Chichen Itza, Yucatan, Mexico.

Anadenobolus chichimecus (DeSaussure), new combination

Julus chichimecus DeSaussure, 1859, Linnea Entom., 13: 331; 1860, Mém. Soc. Phys. Hist. Nat. Genève, 15: 362, fig. 32. ♂♀ ST (MHNG) from "les terres chaudes du Mexique" without further specification, but doubtless from Veracruz (see *A. aztecus* citation).

Rhinocricus chichimecus: Pocock, 1907, Biol. Centr.-Amer., Diplop., p. 69.

Anadenobolus chitarianus (Chamberlin), new combination

Rhinocricus chitarianus Chamberlin, 1933, Pan-Pacific Entom., 9: 23, Pl. II, fig. 9, pl.I II, fig.1. ♂ HT (USNM) from Chitaria, Prov. Cartago, Costa Rica.

Anadenobolus cinchonanus (Chamberlin), new combination

Cubobolus cinchonanus Chamberlin, 1922, Proc. U. S. Nat. Mus. 60(9): 10, pl. 3, figs. 10, 11. ♂ HT (MCZ) from Cinchona, Jamaica (presumably Cinchona Plantation, Blue Mountains, St. Andrew Parish).

Anadenobolus consociatus (Pocock), new combination

Rhinocricus consociatus Pocock, 1894, Journ. Linnean Soc. London, 26: 500, pl. 38, fig. 7. ♂ HT (BMNH) from Union island (between Grenada and St.Vincent), Windward Islands, Lesser Antilles. – Loomis, 1934, Smithsonian Misc. Coll., 89(14): 18.

Rhinocricus consociatus ecaudatus Loomis, 1934, Smithsonian Misc. Coll., 89(14); 18. ♂ HT (USNM) from Grand Anse, Grenada, Lesser Antilles.

Anadenobolus consutus (Loomis), new combination

Cubobolus consutus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 54, fig. 22a,b. ♀ HT (USNM) from Le Brande, Haiti.

Anadenobolus costaricensis (Brolemann), new combination

Rhinocricus costaricensis Brolemann, 1905, Ann. Soc. Entom. France, 75: 375, figs. 26-28. ST (MHNP) from Cariblanco, Prov. Alajuela, Costa Rica.

Anadenobolus curtior (Chamberlin), new combination

Rhinocricus curtior Chamberln, 1918, Bull. Mus. Comp. Zool., 62: 194. ST (MCZ) from Grand Riviere (near Jacmel), Haiti. – Loomis, 1936, Bull. Mus. Comp. Zool., 80: 64, fig. 26.

Range: Haitian localities are cited by Loomis (1936).

Anadenobolus dugesi (Bollman), new combination

Spirobolus (Rhinocricus) dugesi Bollman, 1893, Bull. U. S. Nat. Mus. 46: 194. ♂ HT (formerly USNM, status unknown), from Guanajuato (probably the city rather than state), Mexico.

Rhinocricus dugesi: Pocock, 1907, Biol. Centr.-Amer., Diplop., p. 71.

Anadenobolus edenus (Chamberlin), new combination

Rhinocricus edenus Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 39, figs. 29-32. ♂ HT (ANSP) from Eden, ca. 115 km northwest of Prinzapolca, Dept. Zelaya, Nicaragua.

Anadenobolus excisus (Karsch), new combination

Spirobolus (Rhinocricus) excisus Karsch, 1881, Zeitschr. ges. Naturw., 54: 73. ♀ HT (ZMB) labeled only "Jamaica".

Rhinocricus excisus: Pocock, 1894, Journ. Linnean Soc. London, 26: 491.

Range: St. Thomas and Portland parishes, Jamaica.

Anadenobolus ferrugineus (Daday), new combination

Spirobolus ferrugineus Daday, 1889, Termész. füzetek, 12: 130. HT (originally HNHM), ?destroyed), labeled only "Panama", where never subsequently collected (perhaps mislabeled).

Rhinocricus ferrugineus: Pocock, 1907, Biol. Centr.-Amer., Diplop., p. 70.

Anadenobolus gracilipes (Karsch), new combination

Spirobolus (Rhinocricus) gracilipes Karsch, 1881, Zeitschr. ges. Naturwiss., 54: 71. 2 ♂ ST (ZMB) labeled only "Cuba".

Anadenobolus grammostictus (Pocock), new combination

Rhinocricus grammostictus Pocock, 1894, Journ. Linnean Soc. London, 24: 501. ST (BMNH) from St. Lucia, Lesser Antilles. – Loomis, 1934, Smithsonian Misc. Coll., 89(14): 18, fig. 8.

Anadenobolus grenadensis (Pocock), new combination

Rhinocricus grenadensis Pocock, 1894, Journ. Linnean Soc. London,. 24: 498, pl. 38, fig. 11. ♂ HT (BMNH) from Grenada, Lesser Antilles.

Anadenobolus hegedusi (Daday), new combination

Spirobolus Hegedüsii Daday, 1889, Termész. Füzetek, 12: 130. 2 ST (HNHM) from "Panama" without further indication, and possibly mislabeled. Korsós (1983) designated one of the two original specimens as lectotype, the other as lectoparatype.

Rhinocricus hagedussii [*sic*!] Pocock, 1907, Biol. Centr.-Amer., Diplop., p. 70.

Pocock's curious rendition of the species' name was followed by both Chamberlin (1922) and Loomis (1968).

Anadenobolus heteroscopus (Chamberlin), new combination

Rhinocricus heteroscopus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 194. ♂ HT (MCZ) from Liguanea Plain (Kingston), St. Andrew Par., Jamaica.

Anadenobolus holomelanus (Pocock), new combination

Rhinocricus holomelanus Pocock, 1894, Journ. Linnean Soc. London, 24: 492. HT (BMNH) labeled only "Jamaica".

Range: Central and western parishes of Jamaica. This taxon is almost certainly a subspecies of *R. excisus,* to which Chamberlin's records (1918) for Port Antonio and Bath refer.

Anadenobolus ixtapanus (Chamberlin), new combination

Rhinocricus ixtapanus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 18, fig. 23. ♀ HT (USNM) from Ixtapan del Oro, Mexico, Mexico.

Anadenobolus juxtus (Chamberlin), new combination

Rhinocricus juxtus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 200. ?♂ HT (MCZ) from Grand Etang, Grenada, Lesser Antilles.

The localities cited for the paratypes (Arima, Verdant Vale, St. Georges) are in Trinidad and not Grenada. It is not known whether this is due to a clerical error, or whether this species was actually collected on the two islands; if the latter, the status of *consociatus* relative to *monilicornis* should be re-examined.

Anadenobolus lamprus (Chamberlin), new combination

Rhinocricus lamprus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 19. ♀ HT (USNM) from Xelitla [recte Xilitla], San Luis Potosí, Mexico.

Anadenobolus laticollis (Loomis), new combination

Rhinocricus laticollis Loomis, 1934, Smithsonian Misc. Coll. 89(14): 17, fig. 7. ♂ HT (USNM) from a site between Fort-de-France and St. Pierre, Martinique.

Anadenobolus leptopus (Pocock), new combination

Rhinocricus leptopus Pocock, 1894, Journ. Linnean Soc. London, 24: 503. ♂ HT (BMNH) from St. Lucia, Lesser Antilles.

Anadenobolus leucostigma leucostigma (Pocock)

Rhinocricus leucostigma Pocock, 1894, Journ. Linnean Soc. London, 24: 500, pl. 38, fig. 8. ♂ HT (BMNH) from "Dominica" without further locality. – Hoffman, 1960, Proc. U. S. Nat. Mus., 111: 38.

Anadenobolus leucostigma leucostigma (by implication): Mauriès, 1980, Bull. Mus.natn. Hist. nat., Paris, (4)2: (A4): 1093.

Anadenobolus leucostigma martiniquensis (Chamberlin)

Rhinocricus martiniquensis Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 199. ♂ HT (MCZ) from Mont Rouge, Martinique.– Loomis, 1934, Smithsonian Misc. Coll. 89(14): 16, fig. 6.

Anadenobolus leucostigma martinicensis [sic!] Mauries, 1980, Bull. Mus. natn. Hist. nat. Paris, (4) 2 (A4): 1092, figs. 49-51.

Range: Martinique, Guadeloupe (where on Basse Terre only).

Anadenobolus liparius (Chamberlin), new combination

Rhinocricus liparius Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 190. ♂ HT (MCZ) from Mont Rouge, Martinique.

Anadenobolus macropus (Pocock), new combination

Rhinocricus macropus Pocock, 1894, Journ. Linnean Soc. London, 24: 493, pl. 38, fig. 3. ♂ HT (BMNH) from St. Vincent, Lesser Antilles.

Anadenobolus malkini (Chamberlin), new combination

Rhinocricus malkini Chamberlin, 1956, Ent. News, 57: 157, figs. 1, 2. ♂ HT (USNM) from Musawas, Rio Waspuc, Dept. Colon or Zelaya, Nicaragua.

Anadenobolus marci (Pocock), new combination

Rhinocricus marci Pocock, 1907, Biol. Centr.-Amer., Diplop., p. 66, pl. VI, fig. 11. ♀ HT (BMNH) from San Marcos (not located to department), Nicaragua.

Anadenobolus mayanus (Chamberlin), new combination

Rhinocricus mayanus Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 43, figs. 40, 41. ♂ HT (ANSP) from "Yucatan" without further locality.

Anadenobolus mediator (Chamberlin), new combination

Rhinocricus mediator Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 66. ♂ HT (MCZ) from Furcy, Haiti. – Loomis, 1936, Bull. Mus. Comp. Zool., 80: 66, fig. 27.

Anadenobolus mertensi (Kraus), new combination

Rhinocricus mertensi Kraus, 1954, Senckenb. Biol., 35: 334, figs. 79-82. ♂ HT (SMF) from "Straße nach Sonsonate", Dept. Sonsonate, El Salvador.

Anadenobolus modestior (Silvestri), new combination

Rhinocricus modestior Silvestri, 1905, Bull. American Mus. Nat. Hist., 24: 570, fig. V, 1-3. ♂ HT (AMNH) from Coamo Springs, Puerto Rico.

The Haitian records of *R. modestior* cited by Loomis (1941: 190) are the result of a *lapsus calami*, actually *mediator* was the species intended (MS notes by Loomis).

Anadenobolus monilicornis (von Porat)

Spirobolus monilicornis von Porat, 1876, Bih. Svensk. Vet.-Akad. Handling.4(7): 31. ♂ HT (NRMS) from "Brasilien", presumably mislabeled.

Spirobolus Heilprini Bollman, 1889, Proc. Acad. Nat. Sci. Philadelphia, 99: 127. ST (cited as ANSP, present status unknown), from the Bermuda Islands, without specific indication. Synonymized by Pocock, 1894.

Rhinocricus monilicornis: Pocock, 1894, Journ. Linnean Soc. London, 24: 599.

Range: Widely distributed in the Caribbean region, doubtless anthropochoric; known from Bermuda, Jamaica, Martinique, Hispaniola, Barbados, Guadeloupe, as well as the northern coast of South America (e.g., the Guianas, Trinidad, Tobago).

Anadenobolus morelus (Chamberlin)

Rhinocricus morelus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 20, figs. 24, 25. ♂ HT (USNM) from "Chapultepec", Cuernavaca, Morelos, Mexico.

Anadenobolus motulensis (Chamberlin), new combination

Rhinocricus motulensis Chamberlin, 1938, Publ. Carnegie Inst. Washington, 491: 173, figs. 19-24. ♂ HT (USNM) from San Bulha cenote at Motul, Yucatan, Mexico.

Anadenobolus newtonianus (Chamberlin), new combination

Rhinocricus newtonianus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 187. ♂ HT (MCZ) from Newton, St. Andrew Par., Jamaica.

Anadenobolus nicaraguanus (Chamberlin), new combination

Rhinocricus nicaraguanus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 20, pl. 9, figs. 9-12. ♀ HT (MCZ) from "Chontales Camoapa, Nicaragua", presumably referring to the town of Camoapa in Dept. Boaco, adjacent to Dept. Chontales.

Anadenobolus nodosicollis (Brolemann), new combination

Rhinocricus nodosicollis Brolemann, 1905, Ann. Soc. entom. France, 74: 372, text figs. VIII-IX, pl. 10, figs. 23-25. ♂ HT (MHNP) from Cariblanco, Prov. Alajuela, Costa Rica.

Anadenobolus obesus (Brolemann), new combination

Rhinocricus obesus Brolemann, 1900, Mém. Soc. Zool. France, 13: 107, pl. 10, figs. 26-28. ♂ HT (MHNP) from "Guatemala" without further locality.

Anadenobolus ocraceus (Brolemann)

Rhinocricus ocraceus Brolemann, 1900, Mem. Soc. Zool. France, 13: 124, figs. 115-119. ST (MHNP) from Bas Obispo, near Gamboa, Canal Zone, Panama.

Rhinocricus insulatus Chamberlin, 1925, Proc. Biol. Soc. Washington, 38: 39. ♂? HT (MCZ) from Barro Colorado Island, Canal Zone, Panama. Synonymized by Loomis, 1968.

Eurhinocricus insulatus: Hoffman, 1955, Proc. Biol. Soc. Washington, 68: 34.

Rhinocricus williamsi Chamberlin, 1940, Bull. Univ. Utah, 30(9): 15. ♂? HT (USNM) from Barro Colorado Island, Canal Zone, Panama. Synonymized with *insulatus* by Loomis, 1961; with *ocraceus* by Loomis, 1964.

Eurhinocricus williamsi: Hoffman, 1955, Proc. Biol. Soc. Washington, 68: 35.

Range: Central Panama (Canal Zone and Prov. Panama).

Anadenobolus olivaceus (Newport), new combination

Spirobolus olivaceus Newport, 1844, Ann. & Mag. Nat. Hist., 13: 268. ♀ HT (BMNH) from Oaxaca, Mexico.

Rhinocricus olivaceus: Pocock, 1907, Biol. Centr.-Amer., Diplop., p. 66, pl. VI, fig. 10.

Anadenobolus pedrocola (Chamberlin), new combination

Rhinocricus pedrocola Chamberlin, 1947, Proc. Acad. Nat. Nat. Philadelphia, 99: 41, figs. 38, 39. ♂ HT (ANSP) from Pedro Miguel, Canal Zone, Panama.

Anadenobolus plesius (Chamberlin), new combination

Rhinocricus plesius Chamberlin, 1914, Trans. American Entom. Soc., 40: 187, fig. 2. ♂ HT (missing from ANSP) from Rio Oro valley near Cachí, Prov. Cartago, Costa Rica.

Anadenobolus politus (von Porat)

Spirobolus politus von Porat, 1888, Ann. Soc. Entom. Belgique, 32: 243. ♀ HT (ISNB) labeled only "Antigua."

Anadenobolus politus: Silvestri, 1897, Ann. Mus. Civ. Stor. Nat. Genova, 38: 651. – Mauriès, 1980, Bull. Mus. Natn. Hist. Nat. Paris, (4) 2 (A,4): 1088, figs. 39-48.

Rhinocricus politus: Pocock, 1894, Journ. Linnean Soc. London, 24: 488. – Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 200.

Rhinocricus guadeloupensis Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 190. ♀ HT (MCZ) from Soufríere, Guadeloupe. Synonymized by Mauriès, 1980.

Rhinocricus limatulus Loomis, 1934, Smithsonian Misc. Coll., 89(14): 14, figs. 5a,b. ♂ HT (USNM) from St. Claude, above Basse Terre, Guadeloupe. Synonymized by Mauriès, 1980.

Range: Antigua and Guadeloupe, where widespread and abundant.

Anadenobolus potosianus (Chamberlin), new combination

Rhinocricus potosianus Chamberlin, 1941, Ent. News, 52: 252, fig. 9. ♀ HT (USNM) from Valles, seven miles south of El Banito, San Luis Potosí, Mexico. – Chamberlin, 1943, Bull. Univ. Utah, 34(7): 20, figs. 26, 27.

Range: known from localities along Federal Highway 85 between Ciudad Victoria, Tamaulipas, and Tamazunchale, San Luis Potosí.

Anadenobolus putealis (Loomis), new combination

Rhinocricus putealis Loomis, 1971 ("1969") An. Inst. Biol. Univ. Mexico, Zool., 1: 52, figs. 9-13. ♂ HT (USNM) from Estación Biológica Los Tuxtlas, San Andreas Tuxtla, Veracruz, Mexico.

Anadenobolus ramagei (Pocock), new combination

Rhinocricus Ramagei Pocock, 1894, Journ. Linnean Soc. London, 24: 489. ♀ HT (BMNH) from Sr. Lucia, Lesser Antilles.

Cubobolus ramagei: Loomis, 1934, Smithsonian Misc. Coll. 89(14): 19, fig. 9.

Anadenobolus rarior (Chamberlin), new combination

Rhinocricus rarior Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 187. ♀ HT (MCZ) from Grand Riviere, Haiti (near Jacmel, according to Loomis, 19936).

Anadenobolus rixi (Pocock), new combination

Rhinocricus rixi Pocock, 1907, Biol. Centr.-Amer., Diplop., p. 64, pl. VI, figs. 6a-e. ♂ HT (BMNH) from "Chontales copper mine" (presumably in Dept. Chontales), Nicaragua.

Anadenobolus rogersi (Pocock), new combination

Rhinocricus rogersi Pocock, 1907, Biol. Centr.-Amer., Diplop., p. 61, pl. V, figs. 12a-b. ♂ HT (BMNH) from "Costa Rica", without further indication.

Anadenobolus salleanus (Pocock), new combination

Rhinocricus salleanus Pocock, 1907, Biol. Centr.-Amer., Diplop., p. 64, pl. VI, fig. 7. ♀ HT (BMNH) from Cordoba, Veracruz, Mexico.

Anadenobolus scobinatus (Pocock), new combination

Rhinocricus scobinatus Pocock, 1907, Biol. Centrr.-Amer., Diplop., p. 65, pl. VI, figs. 9a-e. ♂ HT (BMNH) from Retalhuleu, Dept. Retalhuleu, Guatemala.

Anadenobolus simulans (Chamberlin), new combination

Rhinocricus simulans Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 22, pl. 10, figs. 7-10. ♂ HT (USNM) from "Costa Rica" without further locality.

Anadenobolus smithi (Pocock), new combination

Rhinocricus smithi Pocock, 1907, Biol. Centr.-Amer., Diplop., p. 62, pl. VI, figs. 3a-f. ♂ ST (BMNH) from Omilteme and Amoquileca, Guerrero, Mexico.

Anadenobolus socius (Chamberlin), new combination

Rhinocricus socius Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 196. ♂ HT (MCZ) from Grand Etang, Grenada, Lesser Antilles.

Anadenobolus stolli (Pocock), new combination

Rhinocricus stolli Pocock, 1907, Biol. Centr.-Amer., Diplop., p. 62, pl. VI, fig. 2. ♀ HT (BMNH) from Cholhuitz, near San Mateo Ixtalán, Dept. Huehuetenango, Guatemala.

Anadenobolus tejerianus (Chamberlin), new combination

Rhinocricus tejerianus Chamberlin, 1953, American Midl. Natur., 50: 147, figs. 19, 20. ♂ HT (FMNH) from Tejeria, Veracruz, Mexico.

Anadenobolus toltecus (DeSaussure), new combination

Julus toltecus DeSaussure, 1859, Linnea Entom., 13: 331; 1860, Mém. Soc. Phys. Hist. Nat. Genève, 15: 554, fig. 27. ?ST (MNHG) from Cordova, Veracruz, Mexico.

Rhinocricus toltecus: Pocock, 1907, Biol. Centr.-Amer., Diplop., p. 68.

Anadenobolus totonacus (DeSaussure), new combination

Julus totonacus DeSaussure, 1860, Mém. Soc. Phys. Hist. Nat. Genève, 15: 561, fig. 31. ?ST (MHNG) from Orizaba, Veracruz, Mexico.

Anadenobolus translocatus (Loomis)

Rhinocricus translocatus Loomis, 1975, Florida Entom., 58: 182, figs. 20-22. ♂ HT (FSCA) from Portland Gap, St. Thomas Parish, Jamaica.

Anadenobolus vincenti (Pocock), new combination

Rhinocricus vincenti Pocock, 1894, Journ. Linnean Soc. London, 24: 503, pl. 38, fig. 10. ♂ HT (BMNH) from St. Vincent, Lesser Antilles.

Anadenobolus zapotecus (DeSaussure), new combination

Julus zapotecus DeSaussure, 1860, Mem. Soc. Phys. Hist. Nat. Genève, 15: 559, fig. 30. ?ST (MHNG), no locality is specified but Veracruz, Cordoba, and Orizaba are implied.

Genus **Auracricus** Pérez-Asso

Auracricus Pérez-Asso, 1998, Caribbean Journ. Sci., 34: 85. Type species: *Rhinocricus clypeatus* Loomis, 1938, by original designation.

One species, Cuba.

Auracricus clypeatus (Loomis)

Rhinocricus clypeatus Loomis, 1938, Bull. Mus. Comp. Zool., 82: 440, fig. 7. ♂ HT (MCZ) from Cueva del Aura on Pico Turquino, Prov. Santiago de Cuba, Cuba.

Nesobolus clypeatus: Hoffman, 1998, Myriapodologica, 5: 104.

Auracricus clypeatus: Pérez-Asso, 1998, Caribbean Journ. Sci., 34: 85, figs. 1A-C, 4, 5A.

Range: Vicinity of type locality, Sierra Maestra, Cuba.

Genus **Eurhinocricus** Brolemann

Rhinocricus (Eurhinocricus) Brolemann, 1903, Ann. Soc. Entom. France, 72: 131. Type species: *R. (E.) biolleyi* Brolemann, by monotypy. – Pocock, 1908, Biol. Centr.-Amer., Diplopoda, p. 73.

Eurhinocricus Verhoeff, 1937, Zool. Anz., 118: 90. – Schubart, 1951, An. Acad. Brasileira Cienc., 23: 227 (in a quite different perception from that of Brolemann). – Hoffman, 1953, Proc. Biol. Soc. Washington, 66: 181 (revival on the basis of the originally stipulated gonopod characters).

22 nominal species, Central America, Jamaica. The proliferation and diversity of the genus on Jamaica, only recently evident, is noteworthy. This is one of the few milliped genera that reflects a prior land connection between Jamaica and Central America, and occurs nowhere else in the Antilles.

Removed from genus: *Rhinocricus insulatus* Chamberlin, 1925, and *R. williamsi* Chamberlin, 1940, both placed in *Eurhinocricus* by Hoffman (1955) [see *Anadenobolus ocraceus* (Brolemann)]; *Eurhinocricus incursor* Chamberlin, 1953 [see *Dibothrocricus maltzani* (Pocock)].

Eurhinocricus aequaliramus Loomis

Eurhinocricus aequaliramus Loomis, 1975, Florida Entom., 58:177, figs. 9-10 . ♂ HT (FSCA) from Hardwar Gap, St. Andrew Par., Jamaica.

Eurhinocricus barrios Chamberlin

Eurhinocricus barrios Chamberlin, 1953, American Midl. Nat. 50: 138, figs. 11, 12. ♂ HT (?FMNH) from Escobas, opposite Point (? = Puerto) Barrios, Dep. Izabal, Guatemala.

Eurhinocricus biolleyi (Brolemann)

Rhinocricus (Eurhinocricus) biolleyi Brolemann, 1903, Ann. Soc. Ent. France, 72: 132, pl. 1, figs. 1-6. ST (MNHN) from Cocos Island, Costa Rica.

Rhinocricus wheeleri Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 21, pl. 10, figs. 1-3. ♂ HT (USNM) from Port Limon, Prov. Limon, Costa Rica. Synonymized by Hoffman, 1955.

Rhinocricus pygmoides Chamberlin, 1933, Pan-Pacific Entom., 9: 22, figs. 6-8. ♂ HT (USNM) from Parismina, Prov. Limón, Costa Rica. Synonymized by Loomis, 1972.

Rhinocricus cocos Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 38: figs. 27, 28. ♂ HT (ANSP) from Chatham Bay, Cocos Island, Costa Rica. Synonymized by Hoffman, 1953.

Eurhinocricus biolleyi: Hoffman, 1953, Proc. Biol. Soc. Washington, 66: 182; 1955, Proc. Biol. Soc. Washington, 68: 33. – Loomis, 1964, Fieldiana: Zool., 47: 112.

Range: Apparently widely distributed in Costa Rica and Panama as far east as the Canal Zone.

Eurhinocricus bisinuatus Loomis

Eurhinocricus bisinuatus Loomis, 1975, Florida Entom, 58: 178, figs. 11-13. ♂ HT (FSCA) from Hardwar Gap, St. Andrew Par., Jamaica.

Eurhinocricus chichivacus Chamberlin

Eurhinocricus chichivacus Chamberlin, 1953, American Midl. Nat., 50: 139, figs. 1, 2. ♂ HT (FMNH) from Chichivac, near Tecpan [25 km northwest of Chimaltenango], Dept. Chimaltenango, Guatemala.

Eurhinocricus cingendus (Loomis)

Rhinocricus cingendus Loomis, 1937, Bull. Mus. Comp. Zool., 80: 218, figs. 5, 6. ♂ HT (MCZ) from "Main Ridge, Blue Mts., 5000-7000 feet elevation", ?Portland-St. Thomas parishes, Jamaica.

Eurhinocricus cingendus: Hoffman, 1955, Proc. Biol. Soc. Washington, 68: 33.

The elevations mentioned with the type material suggest that the collection was possibly made on the trail from Cinchona to Blue Mountain Peak, which is shared by the two parishes mentioned above. The record for Hardwar Gap (Hoffman, 1995) is no longer reliable, probably based upon another species.

Eurhinocricus cockerelli (Pocock)

Rhinocricus cockerellii Pocock, 1894, Journ. Linnean Soc. London, 24: 505. Type ?♀ (BMNH) from Mandeville, Manchester Par., Jamaica.

Eurhinocricus cockerelli: Hoffman, 1955, Proc. Biol. Soc. Washington, 68: 33.

Range: Central and eastern parishes of Jamaica, at lower elevations.

Eurhinocricus cooki Loomis

Eurhinocricus cooki Loomis, 1961, Proc. U. S. Nat. Mus., 113: 110, figs. 6g, h. ♂ HT (USNM) from Piña area, and Barro Colorado Island, Canal Zone, Panama.

Eurhinocricus eutypus Chamberlin

Eurhinocricus eutypus Chamberlin, 1953, American Midl. Nat., 50: 139, figs. 21, 22. ♂ HT (FMNH) from Volcán Tajumulco, Dept. San Marcos, Guatemala.

Eurhinocricus fissus Verhoeff

Eurhinocricus fissus Verhoeff, 1937, Zool. Anz., 118: 97, figs. 1-5. ♂♀ ST (ZSBS) from "...in der Sierra de la Victoria, bei Laguna, ferner bei Todos Santos und Miraflores", southernmost Baja California Sur, Mexico. A lectotype designation is required.

Rhinocricus tidius Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 37, figs. 23, 24. ♀ HT (ANSP) labeled "Fort Tejon, California". **New synonymy**!

Eurhinocricus tidus [sic!]: Hoffman, 1953, Proc. Biol. Soc. Washington, 66: 183. – Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 152.

The type material of *tidius* was either curatorially mislabeled or possibly dispatched from Fort Tejon instead of its collection site in Baja California. Comparison of the drawings published by Verhoeff and Chamberlin leaves no doubt whatever that the two names are strict synonyms.

Eurhinocricus gossei (Pocock)

Rhinocricus gossei Pocock, 1894, Journ. Linnean Soc. London, 24: 490, pl. 38, fig. 2. ♂♀ ST (BMNH) from "Jamaica" without further locality.

Eurhinocricus gossei: Hoffman, 1955, Proc. Biol. Soc. Washington, 68: 34.

Placement of this species in *Eurhinocricus* was arbitrary and requires confirmation.

Eurhinocricus granulatus Loomis

Eurhinocricus granulatus Loomis, 1975, Florida Entom., 58: 178, figs. 14-15. ♂ HT (FSCA) from Hardwar Gap, St. Andrew Par., Jamaica.

Eurhinocricus heteroscopus Chamberlin

Eurhinocricus heteroscopus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 194. ♂ HT (MCZ) from the "Liguanea Plain" , now encompassed by the eastern part of Kingston, St. Andrew Par., Jamaica.

Eurhinocricus mandevillei (Pocock)

Rhinocricus mandevillei Pocock, 1894, Journ. Linnean Soc. London, 24: 489. ♂ ST (BMNH) from Mandeville, Manchester Par., Jamaica.

Eurhinocricus mandevillei: Hoffman, 1955, Proc. Biol. Soc. Washington, 68: 34.

Eurhinocricus omiltemae (Pocock)

Rhinocricus omiltemae Pocock, 1908, Biol. Centr.-Amer., Diplopoda, p. 67, pl. 6, figs. 12a-c. ♂ ?HT (BMNH) from Omilteme (or Omiltemi), Guerrero, Mexico.

Eurhinocricus omiltemae: Hoffman, 1953, Proc. Biol. Soc. Washington, 66: 182.

Eurhinocricus parvior (Chamberlin)

Rhinocricus parvior Chamberlin, 1918, Bull. Mus. Comp. Zool. 62: 191. ?♂ HT (MCZ) from the "Liguanea Plain" [now part of Kingston, St. Andrew Par.], Jamaica.

Eurhinocricus parvior: Hoffman, 1955, Proc. Biol. Soc. Washington, 68: 34.

Eurhinocricus parvissimus Hoffman

Eurhinocricus parvissimus Hoffman, 1953, Proc. Biol. Soc. Washington, 66: 182, figs. 1-4. ♂ HT (USNM) from Finca Guatemoc, Volcán Tacana above Cacahuatan, Chiapas, Mexico.

Eurhinocricus sabulosus (Pocock)

Rhinocricus sabulosus Pocock, 1894, Journ. Linnean Soc. London, 24: 504, pl. 38, fig. 12. ♂♀ ST (BMNH) from Mandeville, Manchester Par., Jamaica.

Eurhinocricus sabulosus: Hoffman, 1955, Proc. Biol. Soc. Washington, 68: 35.

Eurhinocricus solitarius (Pocock)

Rhinocricus solitarius Pocock, 1894, Journ. Linnean Soc. London, 24: 496, pl. 38, fig. 6. ♂ HT (BMNH) from "Jamaica" without further locality.

Eurhinocricus solitarius: Hoffman, 1955, Proc. Biol. Soc. Washington, 68: 35.

Eurhinocricus storkani Verhoeff

Eurhinocricus storkani Verhoeff, 1937, Zool. Anz., 118: 98, fig. 6. ♂ HT (ZSBS) from Manzanillo, Colima, Mexico.

Eurhinocricus townsendi townsendi (Pocock)

Rhinocricus townsendi Pocock, 1894, Journ. Linnean Soc. London, 24: 505. ?♀ HT (BMNH) from "Jamaica" without further locality.

Eurhinocricus townsendi:Hoffman, 1955, Proc. Biol. Soc. Washington, 68: 35.

Range: Westmoreland, St. Ann, St. Mary, and Portland parishes, Jamaica (Hoffman, 1955).

Eurhinocricus townsendi marginandus Loomis

Eurhinocricus townsendi marginandus Loomis, 1975, Florida Entom., 58: 179, figs. 16-17. ♂ HT (FSCA) from Whitfield Hall, St. Thomas Par., Jamaica.

Eurhinocricus valvatus Loomis

Eurhinocricus valvatus Loomis, 1975, Florida Entom, 58: 181, figs. 18-19. ♂ HT (FSCA) from Blue Mountain Peak, St. Thomas Par., Jamaica.

Genus **Fomentocricus** Pérez-Asso

Fomentocricus Pérez-Asso, 1998, Caribbean Journ. Sci., 34: 88. Type species: *F. benignoi* Pérez-Asso, by monotypy.

One species, Cuba.

Fomentocricus benignoi Pérez-Asso

Fomentocricus benignoi Pérez-Asso, 1998, Caribbean Journ. Sci., 34: 88, figs. 3A-C, 4, 5C-D. ♂ HT (MNHNCu) from Jíquima, Fomento, Prov. Sancti Spirítus, Cuba.

Range: Two localities in Prov. Sancti Spirítus, Cuba.

Genus **Haitobolus** Mauriès & Hoffman

Haitobolus Mauriès & Hoffman, 1998, Myriapodologica, 5: 98. Type species: *Julus haitensis* Gervais, 1847, by original designation.

Two species, Haiti.

Haitobolus haitensis (Gervais)

Julus haitensis Gervais, 1847, in: Walckenaer & Gervais, Hist. Nat. Insectes Apteres, 4: 191. ♂ HT (MNHP) labeled "Haiti" without further locality.

Rhinocricus haitensis: Pocock, 1894, Journ. Linnean Soc. London, 24: 494.

Cubocricus haitensis: Loomis, 1936, Bull. Mus. Comp. Zool., 80: 56.

Rhinocricus latespargor Loomis, 1941, Journ. Washington Acad. Sci., 31: 190, figs. 8, 9. ♂ HT (USNM) from a site between Camp Perrin and Riviére Glace, Haiti. Synonymized by Mauriès & Hoffman, 1998.

Haitobolus haitensis: Mauriès & Hoffman, 1998, Myriapodologica, 5: 98, figs. 1, 2.

Range: So far known only from the type locality of *latespargor*, on the southern peninsula of Haiti.

Haitobolus lethifer (Loomis)

Rhinocricus lethifer Loomis,. 1936, Bull. Mus. Comp. Zool., 80: 67, figs. 28a-d. ♂ HT (USNM) from a site between Petit Goave and Miragoane, Haiti.

Haitobolus lethifer: Mauriès & Hoffman, 1998, Myriapodologica, 5: 99.

Genus **Jobocricus** Pérez-Asso

Jobocricus Pérez-Asso, 1998, Caribbean Journ. Sci., 34: 85. Type species: *J. centralis* Pérez-Asso, by monotypy.

Dibothrocricus Hoffman, 1998, Myriapodologica, 5:105. Type species: *Rhinocricus maltzani* Pocock, 1894, by original designation. **New synonymy!**

Two species: Cuba, Haiti.

Jobocricus centralis Pérez-Asso

Jobocricus centralis Pérez-Asso, 1998, Caribbean Journ. Sci., 34: 88, figs. 2A-C, 4, 5B. ♂ HT (MNHNCu) from Protected Area Jobo Rosado, Yaguajay, Prov. Sancti Spirítus, Cuba.

Range: Central Cuba (provs. Sancti Spirítus and Camagüey).

Jobocricus maltzani (Pocock), new combination!

Rhinocricus maltzani Pocock, 1894, Journ. Linnean Soc. London, 24: 495, pl. 38, figs. 5-5b.♂♀ ST (BMNH) from "Cape Haiti in St. Domingo", presumably Cap-Haïtien, on the north coast of Haiti.

Nesobolus maltzani: Loomis, 1934, Smithsonian Misc. Coll., 89(14): 19; 1936, Bull. Mus. Comp. Zool., 80: 61.

Eurhinocricus incursor Chamberlin, 1953, American Midl. Natur., 50: 139. ♀ HT (FMNH) from Cape Haitien, Haiti. Synonymized by Hoffman, 1998.

Dibothrocricus maltzani: Hoffman, 1998, Myriapodologica, 5: 108, figs. 1-4.

Range: Generally distributed throughout Haiti.

Genus **Leiocricus** Loomis

Leiocricus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 50. Type species: *L. diversipes* Loomis, by original designation.

One species, Hispaniola.

Leiocricus diversipes Loomis

Leiocricus diversipes Loomis, 1936, Bull. Mus. Comp. Zool., 80: 51, figs. 21a-c. ♂ HT (USNM) from Morne Pilboreau, between Ennery and Plaisance, Haiti.

Genus **Nesobolus** Chamberlin

Nesobolus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 203. Type species: *N. toroanus* Chamberlin, by original designation. – Pérez-Asso, 1996, Insecta Mundi, 10: 1 (revision of Cuban species). – Hoffman, 1998, Myriapodologica, 5: 103.

Eight species, Cuba, Haiti.

Species removed from the genus: *Spirobolus domingensis* DeSaussure & Humbert, 1982 [see *Alcimobolus*]; *Rhinocricus maltzani* Pocock, 1894 [see *Jobocricus*].

Nesobolus cuba Pérez-Asso

Nesobolus cuba Pérez-Asso, 1996, Insecta Mundi, 10: 4, figs. 4A-C, 5, 6D. ♂ HT (MNHNCu) from Pico Cuba, Sierra Maestra, Prov. Santiago de Cuba, Cuba.

Nesobolus etymophallus (Loomis)

Rhinocricus etymophallus Loomis, Bull. Mus. Comp. Zool., 82: 436, figs. 5a-c. ♂ HT (MCZ) from Rio Frio in the Boniato Range, Prov. Oriente, Cuba.

Nesobolus etymophallus: Hoffman, 1998, Myriapodologica, 5: 104.

In the original description of this species, Loomis stated that the sternum of the anterior gonopods is similar to that found in *Nesobolus*, but the form of the "anterior lobes and inner gonopods" of *etymophallus* is different. I fail to follow this assertion, as the anterior gonopod as drawn by Loomis is virtually identical with that of *N. toroanus* Chamberlin (illustrated by Peréz-Asso,1996), and the posterior gonopod, while not identical with any of the four taxa treated by that author, nonetheless strongly suggests congeneric relationship with them.

Nesobolus gonolepis (Loomis)

Rhinocricus gonolepis Loomis, 1938, Bull. Mus. Comp. Zool., 82: 438, figs. 6a-c. ♂ HT (MCZ) from mountains north of Imias, Prov. Oriente, Cuba.

Nesobolus gonolepis: Hoffman, 1998, Myriapodologica, 5: 104.

Nesobolus loomisi Hoffman

?Iulus indus Palisot de Beauvois, 1817, Insectes. . . . d'Afrique et d'Amerique, livr. 9, p. 154, pl. 6, fig. 2. Misidentification of specimens from "Santo Domingo" as *Julus indus* Linnaeus, 1758, Systema Naturae, ed. 10, p. 639.

?Spirostreptus indus: Pocock, 1894, Journ. Linnean Soc. London, 24: 506.

?Orthoporus indus: Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 184.

Nesobolus indus: Loomis, 1936, Bull. Mus. Comp. Zool., 80: 59, fig. 24a-b.

Nesobolus loomisi: Hoffman, 1998, Myriapodologica, 5: 105.

Range: Generally distributed in southern Haiti

In the absence of type material, Loomis's allocation of the name *indus* to *Nesobolus*, although arbitrary, has the advantage of giving the name at least provisional identity. Pocock thought the original description depicted a spirostreptid; Loomis (with specimens for comparison) opted for a rhinocricid. A third opinion would be desireable. In any event, it is clear that Palisot's name, whether a junior primary homonym of *Julus indus* L. or simply an erroneous identification of it, cannot be used for the species treated by Loomis in 1936.

Nesobolus piedra Pérez-Asso

Nesobolus piedra Pérez-Asso, 1996, Insecta Mundi, 10: 4, figs. 3A-C, 5, 6E-F. ♂ HT (MNHNCu) from La Isabelica, Gran Piedra, Prov. Santiago de Cuba, Cuba

?Nesobolus ramulus (Loomis)

Rhinocricus ramulus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 76, figd. 33a-b. ♂ HT (MCZ) from Roche Croix on Morne La Hotte, Haiti.

?Nesobolus ramulus: Hoffman, 1998, Myriapodologica, 5: 106.

Nesobolus similis Pérez-Asso

Nesobolus similis Pérez-Asso, 1996, Insecta Mundi, 10: 3, figs. 2A-C, 5, 6B-C. ♂ HT (MNHNCu) from La Ermita, Yunque de Baracoa, Prov. Guantánamo, Cuba.

Range: Yunque de Baracoa, between the Toa and Jaguaní rivers, Prov. Guantánamo, Cuba (map, Pérez-Asso, 1996, fig. 5).

Nesobolus toroanus Chamberlin

Nesobolus toroanus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 204. ♂ HT (MCZ) from "Guantanamo, Cuba", presumably the U. S. Naval base. – Pérez-Asso, 1996, Insecta Mundi, 10: 1, figs. 1A-C, 5, 6A (distribution, variation, synonymy).

Nesobolus yaterus Chamberlin, 1922, Proc. U. S. Nat. Mus. 61(10): 4, pl. 2, figs. 5-10. ♂ HT (USNM) from Yateras, Guantánamo, Cuba. Synonymized by Pérez-Asso, 1996.

Nesobolus libanonus Chamberlin, 1922, Proc. U. S. Nat. Mus., 61(10): 4, pl. 2, fig. 11, pl. 3, figs. 1-5. ♂ HT (USNM) from Monte Liban, Prov. Guantánamo, Cuba. Synonymized by Pérez-Asso, 1996.

Genus **Oxypyge** Silvestri

Oxypyge Silvestri, 1896, Boll. Mus. Zool. Anat. Comp. Univ. Torino, 11(254): 4. Type species: *O. varicolor* Silvestri, by monotypy.

Eight nominal species, Guatemala to Panama (but unknown so far in Costa Rica!).

Oxypyge benedicta Chamberlin

Oxypyge benedictus Chamberlin, 1925, Proc. Biol. Soc. Washington, 38: 40. ♂ HT (MCZ) from Barro Colorado Island, Canal Zone, Panama. – Loomis, 1961, Proc. U. S. Nat. Mus., 113: 111, figs. 6i-j.

Oxypyge confusa Chamberlin

Oxypyge confusa Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 28, pl. 12, figs. 1, 2. ♂ HT (USNM) from "Cacao". Guatemala, presumably a settlement ca. 25 km southeast of Puerto Barrios, Dept. Izabal.

Oxypyge curticauda Chamberlin

Oxypyge curticaudus Chamberlin, 1953, American Midl. Nat., 50: 143, figs. 7,8. ♂ HT (FMNH) from Bobos River, Dept. Izabal, Guatemala.

Oxypyge equalis Chamberlin

Oxypyge equalis Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 29, pl. 12, figs. 7-10. ♂ HT (USNM) from Finca Trece Aguas [also Treceaguas], five km southeast of Senahú, Dept. Alta Verapaz, Guatemala.

Oxypyge ferruginipes Chamberlin

Oxypyge ferruginipes Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 27, pl. 11, figs. 8-12. ♂ HT (USNM) from "Cacao", Guatemala, thought by Loomis to be ca 25 km southeast of Puerto Barrios, Dept. Izabal.

Oxypyge isolata Chamberlin

Oxypyge isolatus Chamberlin, 1925, Proc. Biol. Soc. Washington, 38: 40. ♂ HT (MCZ) from Barro Colorado Island, Canal Zone, Panama.

Oxypyge socia Chamberlin

Oxypyge socia Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 28, pl. 12, figs. 3-6. ♂ HT (USNM) from "Cacao, Guatemala", presumably the settlement ca. 25 km southeast of Puerto Barrios, Dept. Izabal.

Oxypyge varicolor Silvestri

Oxypyge varicolor Silvestri, 1896, Boll. Mus. Zool. Anat. Comp. Univ. Torino, 11(254): 4. ♂ HT (ZMUT) from Punta Sabana, near Lago de Pita, Prov. Darien, Panama.

Genus **Oxypygides** Chamberlin

Oxypygides Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 26. Type species: *O. mesites* Chamberlin, by original designation.

Two species, Guatemala.

Another highly artificial taxon.

Oxypygides lapidicinus Chamberlin

Oxypygides lapidicina Chamberlin, 1922, Proc. U. S. Nat. Mus. 60(8): 26, pl. 11, figs. 3-7. ♂ HT (USNM) from Candalaria Rocks at Seamay, near Senahú, Dept. Alta Verapaz, Guatemala.

Oxypygides mesites Chamberlin

Oxypygides mesites Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 25, pl.10, figs. 11, 12; pl. 11, figs. 1, 2. ♂ HT (USNM) from "Cacao", Guatemala, considered by Loomis to be a place ca. 25 km southeast of Puerto Barrios, Dept. Izabal.

Genus **Rhinocricus** Karsch

Spirobolus (Rhinocricus) Karsch, 1881, Zeitschr. Ges. Naturw., 54: 68. Type species: *R. (S.) parcus* Karsch, by subsequent designation of Pocock, 1894.

Rhinocricus: Pocock, 1894, Journ. Linnean Soc. London, 24: 485. – Hoffman, 1960, Proc. Biol. Soc. Washington, 73: 8 (definition of genus).

Cubocricus Chamberlin, 1922, Proc. U. S. Nat. Mus., 61(10): 5. Type species: *C. suprenans* Chamberlin, by original designation. Synonymized by Hoffman, 1960.

Three (?four) species, Cuba, one, Puerto Rico.

Removed from the genus: virtually all Middle American species described in or referred to *Rhinocricus* are relocated provisionally in *Anadenobolus.*

Rhinocricus barbouri Chamberlin

Rhinocricus barbouri Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 198. ♀ HT (MCZ) from Sierra de Caballos, Isla de Pinos [now Isla de la Juventud], Cuba.

In the absence of males, this little-known species is tentatively referred to *Rhinocricus* in the strict sense because of its overall similarity to *R. duvernoyi*, noted by Chamberlin.

Rhinocricus duvernoyi Karsch

Spirobolus (Rhinocricus) duvernoyi Karsch, 1881, Zeitschr. Ges. Naturw., 54: 77. ♀ HT (ZMB) labeled only "Cuba" without further locality.

Rhinocricus duvernoyi: Pocock, 1894, Journ. Linnean Soc. London, 24: 496. – Hoffman, 1960, Proc. Biol. Soc. Washington, 73: 12.

Range: Prov. Pinar del Rio, Cuba (a record for Guantánamo perhaps refers to *suprenans*).

Rhinocricus maximus maximus (Loomis)

Cubocricus maximus Loomis, 1933, Bull. Mus. Comp. Zool., 75: 358, figs. 5, 6. ♂ HT (MCZ) from Central Jaronu, Prov. Camaguey, Cuba.

Rhinocricus maximus maximus: Hoffman, 1960, Proc. Biol. Soc. Washington, 73: 13.

Range: Central provinces of Cuba.

Rhinocricus maximus bartschi (Loomis)

Cubocricus maximus bartschi Loomis, 1938, Bull. Mus. Comp. Zool., 82: 451. ♂ HT (USNM) from Sierra de Casas, Isla de Pinos, Cuba.

Rhinocricus maximus bartschi: Hoffman, 1960, Proc. Biol. Soc. Washington, 73: 13.

Rhinocricus parcus Karsch

Spirobolus (Rhinocricus) parcus Karsch, 1881, Zeitschr. Ges. Naturw. 54: 68. ♂♀ ST (ZMB) from "Portorico" without further locality, although Vega Baja is ± implied in the original description.

Rhinocricus parcus: Pocock, 1894, Journ. Linnean Soc. London, 24: 485. – Loomis, 1941, Bull. Mus. Comp. Zool., 88: 38, fig. 11. – Hoffman, 1960, Proc. Biol. Soc. Washington, 73: 9, figs. 1-4.

Range: central Puerto Rico, apparently both northern and southern sides.

Rhinocricus suprenans Chamberlin

Rhinocricus suprenans Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 193. ♂ HT (MCZ) from Baracoa, Prov. Guantanamo, Cuba.

Cubocricus suprenans: Chamberlin, 1922, Proc. U. S. Nat. Mus. 60(10): pl. 2, figs. 6-9.

Range: Apparently endemic to easternmost Cuba.

Genus **Thyroproctus** Pocock

Thyroproctus Pocock, 1894, Journ. Linnean Soc. London, 24: 506. Type species: *T. townsendi* Pocock, by original designation. – Hoffman, 1998, Myriapodologica, 5: 57 (synopsis).

Two species, Jamaica.

Thyroproctus cinchonianus Chamberlin

Thyroproctus cinchonianus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 205. ♂ HT (MCZ) from Cinchona Plantation, St. Andrew Par., Jamaica. – Hoffman, 1998, Myriapodologica, 5: 60.

Range: Eastern parishes of Jamaica, in the Blue Mountains.

Thyroproctus townsendi Pocock

Thyroproctus Townsendi Pocock, 1894, Journ. Linnean Soc. London, 24: 506, pl. 37, figs.6a-c. ♂ HT (BMNH) from "Jamaica" without further locality. – Hoffman, 1998, Myriapodologica, 5: 58, figs. 1-4.

Range: Easternmost Jamaica: Portland and St. Thomas parishes.

Genus **Yucatobolus** Chamberlin

Yucatobolus Chamberlin, 1938, Publ. Carnegie Inst. Washington, 491: 173. Type species: *Y. spukilensis* Chamberlin, by original designation.

One species: Yucatan.

Yucatobolus spukilensis Chamberlin

Yucatobolus spukilensis Chamberlin, 1938, Publ. Carnegie Inst. Washington, 491: 173, figs. 25-28. ♀ HT (USNM) from Spukil Cave, Calcehtok, Yucatan, Mexico.

Genus **Zipyge** Chamberlin

Zipyge Chamberlin, 1925, Proc. Biol. Soc. Washington, 38: 40. Type species: *Oxypyge ferruginipes* Chamberlin, 1922, by original designation.

One species: Guatemala.

One of the least-defensible of any names included in this text.

Zipyge ferruginipes (Chamberlin)

Oxypyge ferruginipes Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 27, pl. 11, figs. 8-12. ♂ HT (USNM) from "Cacao", Guatemala, probably the settlement ca. 25 km southeast of Puerto Barrios, Dep.Izabal.

Zipyge ferruginipes: Chamberlin, Proc. Biol. Soc. Washington, 38: 40.

RHINOCRICIDAE OF UNRESOLVED STATUS OR TAXONOMIC POSITION

"Albolatus Group"

Rhinocricus albolatus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 71, figs. 29a-b. ♂ HT (USNM) from Kenscoff, Haiti.

Rhinocricus cinctus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 73, figs. 30a-b. ♂ HT (MCZ) from Morne La Hotte, Haiti.

Rhinocricus furcianus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 192. ♂ HT (MCZ) from Furcy, Haiti.– Loomis, 1936, Bull. Mus. Comp. Zool., 80: 74, figs. 31a-c.

Rhinocricus nigrescens Chamberlin, 1918, Bull. Mus. Comp. Zool. 62: 195. ♂ HT (MCZ) from Furcy, Haiti.– Loomis, 1936, Bull. Mus. Comp. Zool., 80: 75, figs. 32a-b.

The singular form of the posterior gonopod shared by these four species justifies separate generic status for them.

"Hispaniolus Group"

Rhinocricus hispaniolus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 40, figs. 12a-d. ♂ HT (MCZ) from Jarabacoa, Republica Dominicana.

The disjunct species, apparently widespread in the Dominican Republic, clearly requires separate generic status.

"Scobinellus Group"

Rhinocricus scobinellus Loomis, 1936, Bull. Mus. Comp. Zool. 80: 63, figs. 25a,b. ♂ HT (MCZ) from Morne La Hotte, Haiti.

"Ramulus Group"

Rhinocricus ramulus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 76, figs. 33a, b. ♂ HT (MCZ) from Roche Croix, 5000 ft., Morne La Hotte, Haiti.

"Perplicatus Group"

Rhinocricus perplicatus Loomis, 1938, Bull. Mus. Comp. Zool., 82: 444, figs. 9a-c. 0 HT (MCZ) from Cueva del Aura, Pico Turquino, Prov. Santiago de Cuba, Cuba.

Rhinocricus sinuosus Loomis, 1938, Bull. Mus. Comp. Zool., 82: 446, figs. 10a-c. 0 HT (MCZ) from "mountains north of Imias," Prov. Guantanamo, Cuba.

"Pertenuis Group"

Rhinocricus pertenuis Loomis, 1938, Bull. Mus. Comp. Zool., 82: 448, figs. 11a-e. 0 HT (MCZ) from Pico Turquino, +5000 ft. elevation, Prov. Santiago de Cuba, Cuba.

"Sagittatus Group"

Rhinocricus sagittatus Loomis, 1938, Bull. Mus. Comp. Zool., 82: 442, fig. 8a-c. 0 HT (MCZ) from Buenos Aires, 2500-3500 ft. elevation, MontanaTrinidad, Prov. Villa Clara, Cuba.

"Ungrouped species"

Rhinocricus thomasianus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 198. ♀ HT (MCZ) labeled only "St. Thomas, Hassler Exped.".

Could the locality for this large, never recollected, species be correct?

Family Pseudospirobolellidae Brolemann

Pseudospirobolellidae Brolemann, 1913, Bull. Soc. ent. France, p. 476; 1914, Ann. Soc. ent. France, 83: 30.

One genus, endemic in southeast Asia.

Genus **Pseudospirobolellus** Carl

Pseudospirobolellus Carl, 1912, Rev. suisse Zool., 20: 168. Type species: *Spirobolus bulbiferus* Attems, 1903, by monotypy .– Hoffman, 1981, Steenstrupia, 7: 187.

Azygobolus Loomis, 1934, Smithsonian Misc. Coll. 89(14): 25. Type species: *A. tumidus* Loomis, by original designation. Synonymized by Loomis, 1950.

[Additional generic names, based on material from Java and several Pacific islands, are not documented as being extralimital. My 1981 review of the genus cites all generic synonyms as well as those based on the type species].

One pantropical (except Africa) species, another localized in Thailand.

Pseudospirobolellus avernus (Butler)

Spirostreptus avernus Butler, 1876, Ann. & Mag. Nat. Hist., (4) 17: 445. ♂ LT (BMNH) from Rodriques Island, Indian Ocean.

Azygobolus tumidus Loomis, 1934, Smithsonian Misc. Coll., 89(14): 27, text figs. 13a-f, pl. 2, figs. 1, 2. ♂ HT (USNM) from Marigot, St. Martins, Lesser Antilles. Synonymy implied by Loomis, 1950, formalized by Hoffman, 1960.

[Eight additional junior synonyms have been based on material from the Indopacific region].

Range: Presumed native to southeast Asia, now widespread in the East and West Indies (Guadeloupe, Dominica, Haiti) as well as islands in the Pacific and Indian oceans.

Family Trigoniulidae Attems

Trigoniulidae Attems, 1909, in Sjöstedt, Wiss. Ergeb. Schwed. Zool. Exped. Kilimandjaro, 3(19): 25. – Brolemann, 1914, Ann. Soc. entom. France, 83: 30.

Trigoniulinae Hoffman, 1980, Classification of the Diplopoda, p. 80.

About 20 nominal genera, southeast Asia, Australia.

Vacillation about the heirarchic standing of this taxon will doubtless continue until the necessary revisionary work (vis-a-vis the pachybolines) has been accomplished. The present return to the original family status is probably an oversimplification.

The group is represented in the New World only by two species, native to southeast Asia, which have been widely distributed throughout the tropics through agricultural commerce and other human venues. The known ranges of these animals have been fully documented and mapped by Shelley (1999, in press), to which source reference should be made for details.

Genus **Leptogoniulus** Silvestri

Leptogoniulus Silvestri, 1897, Ann. Mus. civ. Stor. nat. Genova, 38: 651. Type species: *Trigoniulus acolastus* Silvestri, by original designation.

Spirostrophus DeSaussure & Zehntner, 1902, in Grandidier, Hist. Phys. Nat. Polit. Madagascar, 27(53): 150. Type species: *Spirobolus naresii* Pocock, 1893, by subsequent designation of Carl, 1912. Synonymized by Hoffman, 1980.

Glosselus Cook, 1911, Proc. U. S. Nat. Mus., 40: 163. Type species: *G. musarum* Cook, by original designation. Synonymized with *Spirostrophus* by Chamberlin, 1922, with *Leptogoniulus* by Hoffman, 1980.

Cairibolus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 209. Type species: *C. antonianus* Chamberlin, by original designation. Synonymized with *Spirostrophus* by Chamberlin, 1922, with *Leptogoniulus* by Hoffman, 1980.

Trucobolus Chamberlin, 1947, Ent. News, 58: 41. Type species: *T. townesi* Chamberlin, by original designation. Synonymized with *Spirostrophus* by Loomis & Hoffman, 1948, with *Leptogoniulus* by Hoffman, 1980.

Litobolus Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 47. Type species: *L. hanevavus* Chamberlin, by original designation. Synonymized with *Spirostrophus* by Loomis & Hoffman, 1948, with *Leptogoniulus* by Hoffman, 1980.

An uncertain number of East Indian species are referred to this genus, some doubtless synonymous; one is widespread throughout the tropics (except of Africa).

Leptogoniulus sorornus (Butler)

Spirostreptus sorornus Butler, 1876, Ann. & Mag. Nat. Hist., (4) 17: 257. ST (BMNH) from Rodriquez Island.

Spirobolus Naresi Pocock, 1893, Ann. & Mag. Nat. Hist. (6) 11: 252, pl. 16, fig. 4-4b. ST (BMNH) from Mahé, Seychelles Islands.

Trigoniulus naresi: Pocock, 1897, Ann. & Mag. Nat. Hist. (6) 15: 93.

Spirostrophus naresi: Attems, 1910, in Voeltzkow, Reise in Ostafrika, 3: 99.

Glosselus musarum Cook, 1911, Proc. U. S. Nat. Mus., 40: 165. ♂ HT (USNM) from La Colombiana, Prov. Limón, Costa Rica.

Glosselus naresii: Cook, 1911, Proc. U. S. Nat. Mus. 40: 166.

Cairibolus antonianus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 210. HT (MCZ) from Port Antonio, St. Andrew Parish, Jamaica. Synonymy implied by Chamberlin, 1922, formalized by Loomis & Hoffman, 1948.

Trigoniulus frater Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 211. HT (MCZ) from near Richmond Bay, Tobago. Synonymy implied by Chamberlin, 1922.

Trigoniulus garmani Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 212. HT (MCZ) from Mont Rouge, Martinique. Synonymy implied by Chamberlin, 1922.

Trigoniulus remotus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 213. HT (MCZ) from Swan Island [Caribbean Sea, east of Honduras]. Synonymy implied by Chamberlin, 1922, formalized by Loomis & Hoffman, 1948.

Leptogoniulus sorornus: Shelley, 1999, Journ. Nat. Hist., 33 (in press).

Range: Widely distributed by commerce through the tropics (except Africa); in our area known from Costa Rica, Grand Bahama, Barbadoes, Grand Cayman, Cuba, Dominica, Republica Dominicana, Grenada, Guadeloupe, Jamaica, Martinique, Puerto Rico, St. Martin, and Swan Islands (map, Shelley, 1999).

Genus **Trigoniulus** Pocock

Trigoniulus Pocock, 1894, Journ. Linnean Soc. London, 24: 484. Type species: *Spirobolus Göesi* Porat, 1876, by original designation.

An indefinite number of species mostly native to the East Indies. One has become almost pantropical through transport of agricultural/horticultural materials.

Trigoniulus corallinus (Gervais)

Iulus corallinus Gervais, 1847, in Walckenaer & Gervais, Hist nat. Insectes Apteres, 4: 171. ST (MHNP) from "de île de France" and "de Bourbon" (May, 1847).

Spirobolus sanguineus Koch, 1847, System der Myriapoden, 202: 3. Location of type material unknown, from Bintang island, Indonesia (date of publication unknown).

Spirobolus lumbricinus Gerstäcker, 1873, in: Van der Decken's Reisen in Ostafrika, Zool., 3: 516. ST (ZMB) from "Sansibar" without further localization. Synonymized by Shelley, 1999.

Spirobolus Göesi Porat, 1876, Bihang Svensk. Vet.- Akad. Handl., 4(7): 136. ST (NRS) from St. Bartholomew. Synonymized by Shelley, 1999.

Spirobolus dominicae Pocock, 1888, Ann. Mag. Nat. Hist., (6) 2: 481, pl. 16, fig. 7. ♂ HT (BMNH) from Dominica, Lesser Antilles. Synonymized by Shelley, 1999.

Spirobolus sanctae-luciae Bollman, 1888, Proc. U. S. Nat. Mus., 11: 214. HT (?USNM) from Santa Lucia, Lesser Antilles. Synonymized by Shelley, 1999.

Spirobolus (Trigoniulus) goesi: DeSaussure & Humbert, 1902, in Grandidier (ed.), Hist. Phys. Nat. Pol. Madagascar, Myriapodes, p. 130.

Trigoniulus lumbricinus: Attems, 1914, Arch. Naturg. 80 (A4): 343.

Range: Widespread through commerce through the tropics. Known from Dominica, St. Lucia, Martinique, Haiti, Guadeloupe, Puerto Rico, Jamaica, Costa Rica (map, Shelley, 1999, in press)

Spirobolida of uncertain family position

Spirobolus platyops Pocock

Spirobolus platyops Pocock, 1908, in Biol. Centr.-Amer., Diplopoda, p. 76. ♀ HT (?BMNH) from "Mescala" [? = Mexcala, Guerrero], Mexico.

Messicobolus platyops: Loomis, 1968, Bull. U. S. Nat. Mus., 266: 83.

Reference of this singular species to *Messicobolus* could only have been highly arbitrary.

Order Spirostreptida

Suborder Cambalidea

Family Cambalidae Bollman

Cambalinae Bollman, 1893, Bull. U. S. Nat. Mus. 46: 156.

Cambalidae Cook, 1895, Ann. New York Acad. Sci., 9: 6. – Loomis, 1938, Proc. U. S. Nat. Mus., 86: 31 monograph of North American species).

Nannolenidae Cook, 1895, Ann. New York Acad. Sci., 9: 6.

Leioderidae Schubart, 1946, Rev. Brasileira Biol., 6: 404.

Although substantial progress has been made since 1958 as regards the cambalid fauna of eastern United States, the Californian taxa have remained enigmatic. It seems unlikely that eleven valid monotypic genera occur there, but until male topotypes of virtually all of the named species have been obtained, very little can be settled. Some of the earliest generic names were based on females, and not all from precise localities. The only option available to me is to list everything essentially as published, with the reservation that I anticipate extensive synonymy as a result of future revisions.

Genus **Alakene** Chamberlin

Alakene Chamberlin, 1941, Bull. Univ. Utah, 31(12): 3. Type species: *A. simplex* Chamberlin, by original designation.

One species, California.

Alakene simplex Chamberlin

Alakene simplex Chamberlin, 1941, Bull. Univ. Utah, 31(12): 4, fig. 2. ♂ HT (USNM) from five miles northeast of Lemoncove, Tulare Co., California.

Genus **Buwatia** Chamberlin

Buwatia Chamberlin, 1912, Ann. Entom. Soc. America, 5: 159. Type species: *B. monterea* Chamberlin, by original designation.

One species, California.

Buwatia monterea Chamberlin

Buwatia monterea Chamberlin, 1912, Ann. Entom. Soc. America, 5: 159, pl. 10, fig. 7. ♀ HT (MCZ) from Pacific Grove, Monterey Co., California.

Genus **Cambala** Gray

Cambala Gray, 1832, in Griffith: "The Animal Kingdom Arranged in Conformity with its Organization by the Baron Cuvier", 15 (Class Insecta 2): 784, pl. 135. Type species, *C. lactaria* Gray, by monotypy. – Loomis, 1938, Proc. U. S. Nat. Mus., 86: 37. – Shelley, 1979, Proc. Biol. Soc. Washington, 92: 551.

Eclytus Chamberlin, 1952, Ent. News, 63: 10. Type species: *E. speobius* Chamberlin, by original designation. Preoccupied by *Eclytus* Holmgren, 1855.

Eclomus Chamberlin, 1952, Ent. News, 63: 71. New name for *Eclytus* Chamberlin, with the same type species. Synonymized by Causey, 1964.

Troglocambala Hoffman, 1956, Mus. Pap. Geol. Surv. Alabama, 35: 9. Type species: *T. loomisi* Hoffman, by original designation. Synonymy implied by Causey, 1964; confirmed by Shelley, 1979.

Seven species, eastern and southeast United States, also Colorado, Washington, Oregon, and extreme northeastern Mexico.

The curious designation of the Insecta volumes of "The Animal Kingdom...." as a subset under a different title ("The Class Insecta arranged by the Baron Cuvier") and volume numbering, accounts for the difference in citation from that used by Jeekel (1971: 108)

Cambala annulata (Say)

Julus annulatus Say, 1821, Journ. Acad. Nat. Sci. Philadelphia, 2: 103. Type material not known to exist, from "Southern States" without further information. Possibly the specimens were taken by Say in 1818 during an excursion along the Atlantic coast between Charleston, S. C., and St. Augustine, Florida. Designation of a neotype is a future desideratum.

?*Cambala lactaria* Gray, 1832, in "The Animal Kingdom. . . as arranged by Baron Cuvier", 15 (Insecta 2): 784, pl. 135, figs. 2, 2a-c. HT (BMNH) labeled only "N. America"..

Cambala annulata: Cope, 1869, Proc. American Philos. Soc., 11: 181. – Hoffman, 1958, Journ. Washington Acad. Sci., 48: 91. – Shelley, 1979, Proc. Biol. Soc. Washington, 92: 556, figs. 5, 11.

Cambala cristula Loomis, 1938, Proc. U. S. Nat. Mus., 86: 39, fig. 12a-c. ♂ HT (USNM) from Etowah, Monroe Co., Tennessee. Synonymized by Hoffman, 1958.

Range: Eastern United States, from southwestern Pennsylvania and central Virginia south to Florida (map, Shelley, 1979, fig. 11).

Pending confirmation by study of the British Museum specimen labeled "*lactarius*" it is assumed to be this species rather than, e. g, *C. minor*.

Cambala hubrichti Hoffman

Cambala annulata [nec Say, 1821] Loomis, 1938, Proc. U. S. Nat. Mus., 86: 37, fig. 11.

Cambala hubrichti: Hoffman, 1958, Journ. Washington Acad. Sci., 48: 93. ♂ HT (USNM) from bluff along Doe River, one mile northwest of Hampton, Carter Co., Tennessee. – Shelley, 1979, Proc. Biol. Soc. Washington, 92: 562, figs. 6, 11.

Range: Southern Blue Ridge province, from southwestern Virginia to northern Georgia and western South Carolina (map, Hoffman, 1958, fig. 1).

Cambala minor Bollman

Cambala annulata minor Bollman, 1888, Proc. U. S. Nat. Mus., 11: 404. ♂ & ♀F ST (USNM), from Bloomington, Monroe Co., Indiana. A male lectotype designated by Shelley, 1979.

Cambala minor Loomis, 1938, Proc. U. S. Nat. Mus. 86: 40. – Shelley, 1979, Proc. Biol. Soc. Washington, 92: 558, figs. 1-4, 7, 12.

Cambala arkansana Chamberlin, 1942, Bull. Univ. Utah, 32(8): 3, figs. 2, 3. ♂ HT (USNM) from one mile north of Pocahontas, Randolph Co., Arkansas. Synonymized by Shelley, 1979.

Cambala cara Causey, 1953, American Midl. Nat., 50: 156, figs. 13, 14. ♂ HT (AMNH) from Cave Springs, Benton Co., Arkansas. Synonymized by Shelley, 1979.

Range: Extreme western Virginia to eastern Oklahoma, south through Kentucky and Tennessee to Louisiana (map, Shelley, 1979, fig. 12). The species is notably troglophilic.

Cambala ochra Chamberlin

Cambala ochra Chamberlin, 1942, Bull. Univ. Utah, 32(8): 3, fig. 1. ♂ HT (USNM) from Darlington, St. Helena Par., Louisiana. – Shelley, 1979, Proc. Biol. Soc. Washington, 92: 563, figs. 8, 12, 13.

Cambala saltillona Chamberlin, 1943, Bull. Univ. Utah, 34(6): 3, figs. 1, 2. ♂ HT (FMNH) from Saltillo, Stephens Co., Texas. Synonymized by Shelley, 1979.

Troglocambala loomisi Hoffman, 1956, Mus. Pap. Geol. Surv. Alabama, 39: 10, figs. 9-11. ♂ HT (Alabama Mus. Nat. Hist.), from Turk's Cave at Brooklyn, Conecuh Co., Alabama.

Range: Southern Indiana southward to western Florida and eastern Texas (map, Shelley, 1979, fig. 12).

Cambala speobia Chamberlin

Eclytus speobius Chamberlin, 1953, Ent. News, 63: 10. ? Imm. HT (USNM) from Wyatt Cave at

Sutton, Edwards Co., Texas (located in Sutton Co., by Chamberlin).

Eclomus speobius Chamberlin, 1953, Ent. News, 63: 71.

Cambala caeca Loomis, 1953, Journ. Washington Acad. Sci., 43: 417, figs. 1-3. ♂ HT (USNM) from Wyatt Cave, Edwards Co., Texas. Synonymized by Causey, 1964.

Cambala captiosa Causey, 1959, Proc. Biol. Soc. Washington, 72: 69, figs. 1-3. ♂ HT (AMNH) from Beck's Ranch Cave, six miles west of Round Rock, Williamson Co., Texas. Synonymized by Causey, 1964.

Cambala reddelli reddelli Causey, 1964, Internat. Journ. Speleol., 1: 239, figs. 1-4. ♂ HT (AMNH) from Border Cave, Culbertson Co., Texas. Synonymized by Shelley, 1979.

Cambala reddelli inornatus Causey, 1964, Internat. Journ. Speleol., 1: , fig. 5. ♂ HT (AMNH) from Wheeler Cave, two miles north of Shamrock, Wheeler Co., Texas. Synonymized by Shelley, 1979.

Range: Central Texas, New Mexico, southeastern Colorado, and northern Coahuila, from both epigaean and subterranean sites.

Cambala texana Loomis

Cambala texana Loomis, 1938, Proc. U. S. Nat. Mus. 86: 40, fig. 13. ♂ HT (USNM) from Nacogdoches, Nacogdoches Co., Texas. – Shelley, 1979, Proc. Biol. Soc. Washington, 92: 564, figs. 10, 13.

Cambala washingtonensis Causey

Cambala washingtonensis Causey, 1954, Ann. Entom. Soc. America, 47: 85, fig. 9. ♂ HT (AMNH) from Wilma, Whitman Co., Washington. – Shelley, 1981, Ent. News, 92: 75, fig. 2.

Range: Type locality and Douglas Co., Oregon.

Genus **Doilene** Chamberlin

Doilene Chamberlin, 1941, Bull. Univ. Utah, 31(11): 6. Type species: *D. carmela* Chamberlin, by original designation.

One species, California.

Doilene carmela Chamberlin

Doilene carmela Chamberlin, 1941, Bull. Univ. Utah, 31(11): 6. ♂ HT (USNM) from Hastings Reservation, Monterey Co., California.

Genus **Endere** Loomis

Endere Loomis, 1938, Proc. U. S. Nat. Mus., 86: 57. Type species: *E. disora* Loomis, by original designation.

One species, California.

Endere disora Loomis

Endere disora Loomis, 1938, Proc. U. S. Nat. Mus., 86: 59, fig. 18a-f. ♂ HT (USNM) from Sunnyside Mine, near Seneca, Plumas Co., California.

Genus **Leiodere** Loomis

Leiodere Loomis, 1938, Proc. U. S. Nat. Mus., 86: 60. Type species: *L. torreyana* Loomis, by original designation.

Four species, California.

Leiodere angelorum Chamberlin

Leiodere angelorum Chamberlin, 1943, Bull. Univ. Utah, 34(6): 5, fig. 2. ♂ HT (FMNH) from "Los Angeles" California.

Demonstrating the identity of this name once again becomes the responsibility of some future worker; whether it is even a *Leiodere* cannot be assumed from the published description.

Leiodere dasyura Loomis

Leiodere dasyura Loomis, 1938, Proc. U. S. Nat. Mus., 86: 64, fig. 21a-d, pl. 2, fig. 2. ♂ HT (USNM) from Tajiguas, Santa Barbara Co., California.

Leiodere nana Loomis

Leiodere nana Loomis, 1938, Proc. U. S. Nat. Mus., 86: 62, fig. 20a-f. ♂ HT (USNM) from a site between Vallejo and Cordelia, Solano Co., California.

Leiodere torreyana Loomis

Leiodere torreyana Loomis, 1938, Proc. U. S. Nat. Mus., 86: 61, figs. 19a-c. ♂ HT (USNM) from Torrey Pines at La Jolla, San Diego Co., California.

Genus **Mexicambala** Causey

Mexicambala Causey, 1964, Internat. Journ. Speleol. 1: 244. Type species: *M. russelli* Causey, by original designation; 1971, Proc. Biol. Soc. Washington, 84: 271.

Three species, confined to caves in Tamaulipas, San Luis Potosí, and Oaxaca.

Mexicambala fishi Causey

Mexicambala fishi Causey, 1971, Proc. Biol. Soc. Washington, 84: 280, figs. 1e, 2d, 4. ♂ HT (USNM) from Cueva Arriba de Rio Iglesia, four miles east of Huautla (18.20N, 96.45W), Oaxaca.

Range: Recorded from numerous caves in the vicinity of Huautla de Jimenez, Oaxaca.

Mexicambala inopis Causey

Mexicambala inopis Causey, 1971, Proc. Biol. Soc. Washington, 84: 276, figs. 1b. ♂ HT (USNM) from Sótano de la Joya de Salas, about six miles west of Rancho del Cielo, Gomez Farias region, Tamaulipas.

Mexicambala blandus Causey, 1971, Proc. Biol. Soc. Washington, 84: 276, figs. 1c, 2b, 3. ♂ HT (USNM) from "Harrison's Sinkhole" at Rancho del Cielo, five km northwest of Gomez Farias, Tamaulipas. Synonymized by Shear, 1986.

Range: Caves in the Sierra de Guatemala, southern Tamaulipas.

Mexicambala russelli Causey

Mexicambala russelli Causey, 1964, Internat. Journ. Speleol. 1: 244, figs. 7-13. ♂ HT (AMNH) from Cueva de la Parra, five km north of Xilitla, San Luis Potosí.

Range: Caves in Sierra Madre Oriental in eastern San Luis Potosí.

Genus **Nannolene** Bollman

Nannolene Bollman, 1887, Ann. New York Acad. Sci., 21: 82. Type species: *Iulus burkei* Bollman, by original designation.– Loomis, 1938, Proc. U. S. Nat. Mus., 86: 42.

Nine nominal species, California, Washington, Oregon. Numerous species described under this generic name from Hawai'i appear to be congeneric with those known from southern California.

There being no reason to assume that the species illustrated by Chamberlin (1922) as *N. burkei* is conspecific or even congeneric with the types of that species, the identity of *Nannolene* remains in doubt until male topotypes have been studied. The following list obviously has little more than reference value as a guide to the literature.

Nannolene burkei (Bollman)

Iulus burkei Bollman, 1887, American Natur., 21: 82. ♀ ST (?USNM) from Ukiah, Mendocino Co., California.

Nannolene burkei: Bollman, 1887, Entom. Americana, 2: 225.

Nannolene catalina Chamberlin

Nannolene catalina Chamberlin, 1941, Bull. Univ. Utah, 31(11): 5. ♂ HT (?USNM) from Hamilton Canyon, Santa Catalina Island, Los Angeles Co., California.

"The distinctive form of the male gonopods will be illustrated in another place." This intention was apparently never realized.

Nannolene cincta Chamberlin

Nannolene cincta Chamberlin, 1941, Bull. Univ. Utah, 31(11): 4, fig. 1. ♂ HT (USNM) from Arlington, Snohomish Co., Washington.

Range: Also reported by Chamberlin from Guernsey Creek, California, which I have so far not been able to locate.

Nannolene corticolens Chamberlin

Nannolene corticolens Chamberlin, 1951, Great Basin Natur., 11: 31, fig. 3. ♂ HT (USNM) from Marsch Creek Springs, near Concord, Contra Costa Co., California.

Nannolene dorothea Chamberlin

Nannolene dorothea Chamberlin, 1941, Bull. Univ. Utah, 31(12): 4, fig. 3. ♂ ?HT (or ST) (USNM) from one of four localities in California: Kernville, Squaw Valley, Isabella, and Hammond. The origin of the holotype - if one was designated - was not stated, and the subsequent selection of Kernville by Chamberlin & Hoffman (1958) was not based on direct knowledge of the case.

Nannolene keiferi Chamberlin

Nannolene keiferi Chamberlin, 1943, Ent. News, 54: 88. HT (USNM) from Sacramento, California.

Nannolene minor Loomis

Nannolene minor Loomis, 1938, Proc. U. S. Nat. Mus., 86: 44, fig. 14a-b. ♂ HT (USNM) from near Bakersfield, Kern Co., California.

Nannolene personifer Chamberlin

Nannolene personifer Chamberlin, 1941, Bull. Univ. Utah, 31(12): 5, figs. 4, 5. ♂ HT (USNM) from nine miles north of Placerville, El Dorado Co., California.

Nannolene violacea Loomis

Nannolene violacea Loomis, 1938, Proc. U. S. Nat. Mus., 86: 46, fig. 15, pl. 2, fig. 3. ♂ HT (USNM) from south of Atascadero, San Luis Obispo Co., California.

Range: Known also from the vicinity of Tejon Pass, Kern Co., California; Loomis's record for Medford, Oregon, was based on immature males certainly not referable to this species.

Genus **Odachurus** Loomis

Odachurus Loomis, 1938, Proc. U. S. Nat. Mus., 86: 54. Type species: *O. petasatus* Loomis, by original designation.

One species, California.

Odachurus petasatus Loomis

Odachurus petasatus Loomis, 1938, Proc. U. S. Nat. Mus., 86: 55, fig. 17a-b. ♀ HT (USNM) from Torrey Pines, La Jolla, San Diego Co., California.

Genus **Paiteya** Chamberlin

Paiteya Chamberlin, 1910, Ann. Entom. Soc. America, 3: 258. Type species: *P. errans* Chamberlin, by original designation.

One species, California.

Paiteya errans Chamberlin

Paiteya errans Chamberlin, 1910, Ann. Entom. Soc. America, 3: 258, pl. 43, figs .4-7. ♀ HT lost, labeled only "Southern California."

Genus **Pharodere** Loomis

Pharodere Loomis, 1938, Proc. U. S. Nat. Mus., 86: 51. Type species: *P. radiata* Loomis, by original designation.

One species, California

Pharodere radiata Loomis

Pharodere radiata Loomis, 1938, Proc. U. S. Nat. Mus., 86: 53, fig. 16a-c. ♂ HT (USNM) from Torrey Pines, La Jolla, San Diego Co., California.

Genus **Platydere** Loomis

Platydere Loomis, 1938, Proc. U. S. Nat. Mus., 86: 48. Type species: *P. caeca* Loomis, by original designation.

One species, California.

Platydere caeca Loomis

Platydere caeca Loomis, 1938, Proc. U. S. Nat. Mus., 86: 50. ♂ HT (USNM) from Tajiguas, Santa Barbara Co., California.

Genus **Tigolene** Chamberlin

Tigolene Chamberlin, 1941, Bull. Univ. Utah, 31(11): 6. Type species: *T. clementinus* Chamberlin, by original designation.

One species, California.

Tigolene clementinus Chamberlin

Tigolene clementinus Chamberlin, 1941, Bull. Univ. Utah, 31(11): 6, fig. 2. ♂ HT (USNM) from San Clemente Island, Los Angeles Co., California.

The posterior gonopod of this species, as illustrated by Chamberlin in lateral (**not** anterior!) aspect, is remarkably similar to the form characteristic of the genus *Cambala*.

Genus **Titsona** Chamberlin

Titsona Chamberlin, 1912, Ann. Entom. Soc. America, 5: 160. Type species: *T. sima* Chamberlin, by original designation.

One species, California, possibly another, Nevada..

Titsona sima Chamberlin

Titsona sima Chamberlin, 1912, Ann. Entom. Soc. America, 5: 160, pl. 10, figs. 4-6. Type material lost, from Oroville, Butte Co., California. – Loomis, 1943, Bull. Mus. Comp. Zool., 92: 393, figs. 10a-b.

Range: Recorded from Yolo and Butte counties, California.

Titsona tida Chamberlin

Titsona tida Chamberlin, 1962, Proc. Biol. Soc. Washington, 75: 54, fig. 6. ♂ HT (USNM) from vicinity of Mercury, Nye Co., Nevada.

There is no way to deduce from the description what taxon this species represents.

Genus **Tridere** Cook & Loomis

Tridere Cook & Loomis, in: Loomis, 1938, Proc. U. S. Nat. Mus. 86: 33. Type species: *T. chelopa* Cook & Loomis, by original designation.

Tridere chelopa Cook & Loomis

Tridere chelopa Cook & Loomis, in: Loomis, 1938, Proc. U. S. Nat. Mus. 86: 36, fig. 10a-g; pl. 2, figs. 6, 7. ♂ HT (USNM) from a site "...beside the road [presumably US Hy. 80] from San Diego to El Centro, Calif., about two miles above Mountain Springs..."

Judged from the printed account of the type locality, it must be located in the extreme southwestern corner of Imperial County, rather than San Diego County as deduced by Chamberlin & Hoffman, 1958.

CAMBALIDEA OF UNCERTAIN FAMILY POSITION

Genus **Jarmilka** Shear

Jarmilka Shear, 1973, Bull. Assoc. Mexican Cave Stud., 5: 43. Type species: *J. alba* Shear, by original designation.

One species, Belize.

Jarmilka alba Shear

Jarmilka alba Shear, 1973, Bull. Assoc. Mexican Cave Stud., 5: 44, figs. 1-3. ♂ HT (MCZ) from Mountain Cow Cave [ca. 89.0W, 16.50N), Belize.

Suborder Epinannolenoidea Chamberlin

Family Choctellidae Chamberlin & Hoffman

Choctellidae Chamberlin & Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 71: 7.

One genus, southeastern United States.

Genus **Choctella** Chamberlin

Choctella Chamberlin, 1918, Psyche, 25: 25. – Loomis, 1943, Bull. Mus. Comp. Zool., 92: 371.

Two species, southeastern United States.

Choctella cumminsi Chamberlin

Choctella cumminsi Chamberlin, 1918, Psyche, 25: 25. ♂ HT (MCZ) from Glendale Hills, Davidson Co., Tennessee. – Loomis, 1943, Bull. Mus. Comp. Zool., 92: 371, fig. 9 a, b. – Hoffman, 1965, Proc. Biol. Soc. Washington, 78: 55, fig. 4.

Range: Cumberland Plateau in central Tennessee and northern Alabama.

Choctella hubrichti Hoffman

Choctella hubrichti Hoffman, 1965, Proc. Biol. Soc. Washington, 78: 55, figs. 1-3. ♂ HT (USNM) from Roebuck Plaza, between Trussville and Birmingham, Jeffferson Co., Alabama.

Family Pseudonannolenidae Silvestri

Pseudonannolenidae Silvestri, 1895, Ann. Mus. Civ. Stor. Nat. Genova, 34: 774. – Mauriès, 1987, Bull. Mus. nat. Hist. natur., Paris, (4) 9 (A): 170, 196 (elevated to ordinal rank).

Epinannolenidae Chamberlin, 1922, Proc. U. S. Nat. Mus., 61(10): 2.

Two (?three) genera, Argentina to Costa Rica and Cuba.

Genus **Cambalomma** Loomis

Cambalomma Loomis, 1941, Journ. Washington Acad. Sci., 31: 00. Type species: *C. laevis* Loomis, by original designation.

One species: Haiti.

Cambalomma laevis Loomis

Cambalomma laevis Loomis, 1941, Journ. Washington Acad. Sci., 31: 189, figs. 1-7. ♂ HT (USNM) from Jeremie, Haiti.

Genus **Epinannolene** Brolemann

Epinannolene Brolemann, 1903, Ann. Soc. Ent. France, 72: 135. Type species: *E. pittieri* Brolemann, by monotypy.

About 30 species, Costa Rica to Peru and Brasil, also widespread in the West Indies (except Jamaica).

Epinannolene affinis Loomis

Epinannolene affinis Loomis, 1961, Proc. U. S. Nat. Mus., 113: 114, fig. 7d. ♂ HT (USNM) from Piña area, Canal Zone, Panama.

Epinannolene bicornis Brolemann

Epinannolene bicornis Brolemann, 1905, Ann. Soc. Entom. France, 74: 356, fig. 16. ♂ HT (MHNP) from Cariblanco, Prov. Alajuela, Costa Rica.

Range: Recorded from several localities in Prov. Chiriquì, Panama (Loomis, 1964).

Epinannolene biseriatus Loomis

Epinannolene biseriatus Loomis, 1938, Bull. Mus. Comp. Zool., 82: 434, fig. 4. ♂ HT (MCZ) from south side of Pico Turquino, Prov. Santiago de Cuba, Cuba.

Epinannolene caeca Loomis

Epinannolene caeca Loomis, 1964, Fieldiana: Zool., 47: 120, figs. 12F-H. ♂ HT (FMNH) from Barro Colorado Island, Canal Zone, Panama.

Epinannolene convexus Loomis

Epinannolene convexus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 32, fig. 13. ♂ HT (USNM) from Morne La Hotte, 3000-7800 ft., Haiti.

Epinannolene cubensis (Bollman)

Nannolene cubensis Bollman, 1888, Proc. U. S. Nat. Mus., 11: 335. ♀ HT (?USNM) from Cuba, supposedly from the vicinity of Havana.

Epinannolene cubensis: Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 179.

Epinannolene curta Loomis

Epinannolene curta Loomis, 1941, Bull. Mus. Comp. Zool., 88: 36, fig. 10a,b. ♂ HT (MCZ) from El Yunque, Dept. Humaco, Puerto Rico.

Epinannolene dominicana (Pocock)

Spirostreptus (Nodopyge) dominicanus Pocock, 1888, Ann. & Mag. Nat. Hist., (6) 2: 478. ♂ HT (BMNH) from Dominica, Lesser Antilles.

Epinannolene dominicana: Chamberlin, 1918, Bull. Mus. Comp. Zool. 62: 179. – Hoffman, 1960, Proc. U. S. Nat. Mus., 111: 36, fig. 1.

Epinannolene grenadae Chamberlin

Epinannolene grenadae Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 181. HT (MCZ) from Grand Étang, Grenada.

Epinannolene haitiensis Chamberlin

Epinannolene haitiensis Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 179. HT (MCZ) from Grand Rivière, Haiti.

Epinannolene ornata Chamberlin

Epinannolene ornata Chamberlin, 1918, Bull. Mus.Comp. Zool., 62: 180. HT (MCZ) from Petionville, Haiti.

Range: Additional Haitian localities cited by Loomis (1936).

Epinannolene pittieri Brolemann

Epinannolene pittieri Brolemann, 1903, Ann. Soc. Entom. France, 72: 136, figs. 3-7. ♂ HT (MHNP) from Cocos Island, Costa Rica.

Range: This taxon seems not to have been recorded from any mainland site, although reported from Guadeloupe and perhaps occurs elsewhere under one or more undetected junior synonym. That the known occurrences are the result of synanthropy seems very likely.

The status of *pittieri* and a number of closely related forms dispersed through the Antilles has been discussed by Maurìes (1980, 1987), who felt that populations on Guadeloupe and elsewhere are recognizably distinct at the subspecies level. Having no experience with the systematics of this genus, I defer the expression of value judgements for some future revisionary work and record the taxa as proposed.

Epinannolene pittieri barbadensis Mauriès

Epinannolene pittieri barbadensis Mauriès, 1987, Bull. Mus. nat. Hist. natur., Paris, (4) 9 (A): 185, figs. 33-34. ♂ HT (ZMUC) from cave at Spring Head, Barbados, Lesser Antilles.

Epinannolene pittieri bermudensis Mauriès

Epinannolene pittieri bermudensis Mauriès, 1987, Bull. Mus. nat. Hist. natur., Paris, (4) 9 (A): 187, figs. 35-37. ♂ HT (BMNH) from Hamilton, Bermuda.

Epinannolene pittieri guadeloupensis Mauriès

Epinannolene pittieri guadeloupensis Mauriès, 1980, Bull. Mus. nat. Hist. natur., Paris, (4) 2 (A): 1098, figs. 55, 56. ♂ HT (MNHP) from Trace Victor Hugo, côté Matouba, Basse-Terre, Guadeloupe.

Perhaps specifically distinct from nominate *pittieri*?

Epinannolene pittieri mariagalandae Mauriès

Epinannolene pittieri mariagalandae Mauriès, 1980, Bull. Mus. nat. Hist. natur., (4) 2 (A): 1096, figs. 57, 58. ♂ HT (MNHP) from grotte du Trou-á-Diable at Maria-Galante, Basse-Terre, Guadeloupe.

Range: Also recorded (Mauriès, 1987) from St. Thomas, where almost certainly a synanthropic species.

Epinannolene plana Loomis

Epinannolene plana Loomis, 1961, Proc. U. S. Nat. Mus. 113: 116, fig. 7h. ♂ HT (USNM) from El Valle, Prov. Cocle, Panama.

Epinannolene robusta Loomis

Epinannolene robusta Loomis, 1961, Proc. U. S. Nat. Mus., 113: 115, fig.s. 7e-g. ♂ HT (USNM) from Cerro Campana, Prov. Panama, Panama.

Epinannolene sulcata Loomis

Epinannolene sulcata Loomis, 1964, Fieldiana:Zoology, 47: 120, fig. 12E. ♂ HT (FMNH) from Finca Palo Santo, near Nueva California, Prov. Chiriquì, Panama.

Epinannolene virgata Loomis

Epinannolene virgata Loomis, 1936, Bull. Mus. Comp. Zool., 80: 34, fig. 14. ♂ HT (USNM) from vicinity of Trouin, Haiti.

Suborder Spirostreptidea Brandt

Spirostreptidea (as suborder) Attems, 1909, Zool. Anz., 34: 159; 1914, Zoologica (Stuttgart) 25 (65,66): 45 et seq.

Family Spirostreptidae Brandt

Spirostreptidea Brandt, 1833, Bull. Soc. imp. Nat. Moscow, 6: 203 (corresponding to modern ordinal concept).

Spirostreptidae Attems, 1909, Zool. Anz., 34: 159 (first use of name in present context); 1914, Zoologica (Stuttgart) 25 (65,66): 45 et seq. – Krabbe, 1982, Abhandl. Naturw. Ver. Hamburg, NF 24: 1 et seq.

About 100 nominal genera, Oklahoma and Arizona south to Argentina; Africa and Madagascar; eastern Mediterranean region; Seychelles.

This family, which after the Chelodesmidae is the most diverse and speciose milliped group in the Neotropical region, is only marginally represented in the West Indies. Krabbe (1982: 353-355) listed only eight species, of which one (*abstemius)* has been shown to be a mislabeled Venezuelan species, and two (*grenadae* and *antillanus*) withdrawn into *O. cavicollis* as probably introduced populations of that Venezuelan species. One (*indus*) is now known to be an endemic Haitian rhinocricid, and one (*triquetrus)* although known only from females, projects the subtle aura of an alien immigrant. The three survivors are *O. sculpturatus* on Puerto Rico and *O. haitiensis* and *O. caelatus* on Hispaniola. That these might also prove to be introduced mainland species is hardly less probable than the status of relictual fragments of earlier, more generous representation of the family in the Antilles.

The great generic diversity of spirostreptids in South America never transgressed the Panama portal. Only the genus *Orthoporus* extended north of the isthmus, but it has - apparently in fairly recent times - speciated rather conspicuously throughout Central America and into southwestern United States where a few xerobiotic colonizers are widespread and abundant. An endemic Mesamerican genus (*Mayastreptus)* seems likely to be a localized derivative group from an orthoporid ancestor.

The classification of this family has been seriously complicated by the Chamberlinian practice of basing new names upon female specimens, with "diagnostic" characters derived primarily from ornamentation of the collum. Since this procedure assumed a specificity (and taxonomic importance) that does not exist, a counter tendency to discount such illusory species has evolved in recent decades. Abetted by the discovery that the gonopods - of at least some species - are subject to appreciable variation, one result of this more skeptical approach has been wholesale escalation of long synonymies. This in itself is not undesireable, so long as the possibility is considered that specific characters may be more convincingly expressed in peripheral character systems than in gonopods in rapidly (and recently) evolving milliped taxa.

Entry into the large, complex, and often arcane world of spirostreptids has been rendered easy and relatively painless, thanks to Dr. Elke Krabbe's praiseworthy, synopsis of the entire family (1982). Complete literature references are given for nearly all species, as well as information on types and type localities. Access to this source is essentially mandatory for anyone contemplating systematic research on Spirostreptidae.

Removed from checklist area: *Gymnostreptus, non sensu* Brolemann, 1902, *per G. pacificus* and *G. vagans* Chamberlin, 1922 [see *Mayastreptus, infra*].

Genus **Isoporostreptus** Silvestri

Isoporostreptus Silvestri, 1898, An. Mus. Nac. Buenos Aires, 6: 73. Type species: *I. villicola* Silvestri, by monotypy. – Hoffman, 1953, Lloydia, 16: 150 (synopsis of genus).

Seven species, Panama, Colombia, Ecuador.

Isoporostreptus pittieri Hoffman

Isoporostreptus pittieri Hoffman, 1953, Lloydia, 16: 151, figs. 6, 7. ♂ HT (USNM) from Los Siguas, Prov. Chiriquì, Panama.

Verification of the location of "Los Siguas" is desireable; one of the more eastern provinces seems more biogeographically plausible for this genus than Chiriquì.

Genus **Mayastreptus** Hoffman

Mayastreptus Hoffman, 1998, Myriapodologica, 5: 121. Type species: *Gymnostreptus vagans* Chamberlin, 1922, by original designation.

Three species: Central America (Guatemala, Costa Rica, El Salvador).

Mayastreptus confragosus (Karsch)

Spirostreptus (Nodopyge) confragosus Karsch, 1881, Zeitschr. ges. Naturwiss., 54: 44. ♀ HT (ZMB) from "Costa Rica" without further locality.

Spirostreptus (Scaphiostreptus) confragosus: Brolemann, 1905, Ann. Soc. Ent. France, 74: 367, text fig. VII, pl. 9, fig. 20, pl. 10, fig. 21.

Orthoporus confragosus: Pocock, 1909, Biol. Centr.-Amer., Diplop., p. 101. – Loomis, 1968, Bull. U. S. Nat. Mus., 266: 99.

Gymnostreptus pacificus Chamberlin, 1922, Proc. U. S. Nat. Mus. 60(8): 14, pl. 7, figs. 2-4. ♂ HT (USNM) from Santo Domingo de San Mateo, Prov. San José, Costa Rica.

Epistreptus (Microtrullius) pacificus: Attems, 1950, Ann. Naturh. Mus. Wien, 57: 218.

Mayastreptus confragosus: Hoffman, 1998, Myriapodologica, 5: 121.

Range: Costa Rica.

Mayastreptus laetus (Chamberlin)

Gymnostreptus laetus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 13, pl. 6, figs. 7-9. ♂ HT (USNM) from Joyabaj, Prov. Quiche, Guatemala.

Mayastreptus laetus: Hoffman, 1998, Myriapodologica, 5: 122.

Mayastreptus vagans (Chamberlin)

Gymnostreptus vagans Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 13, pl. 6, fig. 10, pl. 7, fig. 1. ♂ HT (USNM) from "Candalaria Rocks, Scamay Estuary" Guatemala. According to Shear (1977: 341) "Scamay" is a misinterpretation of "Seamay", one of three towns near Senahú, Dept. Alta Verapaz. The relevance of "estuary" to such an inland locality is not clear, perhaps it is a misperception of another word on a hand-written label.

Epistreptus (Microtrullius) vagans: Attems, 1950, Ann. Naturh. Mus. Wien, 57: 218.

Epistreptus (Microtrullius) pacificus + vagans: Kraus, 1954, Senckenb. biol., 35: 340.

Mayastreptus vagans: Hoffman, 1998, Myriapodologica, 5: 122, figs. 1-3, 5, 6.

Range: Dept. Alta Verapaz, Guatemala; general in El Salvador.

Genus **Orthoporus** Silvestri

Orthoporus Silvestri, 1897, Boll. Mus. Zool. Anat.comp. Torino, 12(283): 7. Type species: *O. diaporoides* Silvestri, by monotypy. – Krabbe, 1982, Abhandl. Naturwiss. Ver. Hamburg, NF 24: 347.

Diaporus Silvestri, 1897, Boll. Mus. Zool. Anat. comp. Torino, 12(283): 8. Type species: *Alloporus americanus* Silvestri, 1895, by original designation. Synonymized by Pocock, 1909.

Scaphiostreptus Brolemann, 1902, Rev. Mus. Paulista, 5: 150. Type species, *S. fuscipes* Porat, 1888, by subsequent designation of Pocock, 1909. Synonymized by Pocock, 1909.

Gymnostreptus (Trinidadius) Verhoeff, 1941, Arch. Naturg. NF 10: 297. Type species: *G.(T.) klagesi* Verhoeff, by monotypy. The type species occurs in the Lesser Antilles.

About 80 nominal species, Argentina and Brazil north to Arizona and Oklahoma.

The remarkable proliferation of names based on members of this genus has in recent years been severely curtailed by the investigations on the taxa of northern Mexico and southwestern United States by Causey (1975) and Loomis (1966), whose conclusions I have adopted *in toto*. Until similar synthesis has been performed for the more southern parts of our area, I have no option but to list all names as proposed, with the realization that many of them will be found invalid.

Removed from the genus: *Spirostreptus confragosus* Brolemann, 1905 [see *Mayastreptus, supra*].

Orthoporus absconsus Chamberlin

Orthoporus absconsus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 15, pl. 7, figs. 5-8. ♂ HT (USNM) from Santo Domingo de San Mateo, Prov. San José, Costa Rica. – Loomis, 1968, Bull. U. S. Nat. Mus., 266: 97.

Scaphiostreptus (Scaphiostreptus) absconsus: Attems, 1950, Ann. Naturh. Mus. Wien, 57: 231. – Kraus, 1954, Senckenb. biol., 35: 340.

Range: Vicinity of San Jose, Costa Rica north to El Salvador and northern coast of Honduras (San Pedro Sula).

Orthoporus acanthethus Chamberlin

Orthoporus acanthethus Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 57, figs. 70, 71. ♂ HT (ANSP) from Piedras Negras, Dept. Petén, Guatemala.

Orthoporus ampussis (Karsch)

Spirostreptus (Nodopyge) ampussis Karsch, 1881, Zeitschr. ges. Naturw. 54: 43. ♂ HT (ZMB) from Puebla, Mexico.

Orthoporus ampussis: Pocock, 1909, Biol. Centr.-Amer., Diplopod., p. 102.

Orthoporus asper (Attems)

Scaphiostreptus asper Attems, 1950, Ann. Naturh. Mus. Wien, 57: 234, figs. 57-59. ♂ HT (NMW) labeled only "Mexico" (possibly from Tampico, in the opinion of Causey, 1975).

Orthoporus asper: Loomis, 1968, Bull. U. S. Nat. Mus. 226: 98.

This species is manifestly very similar to *O. texicolens* in gonopod structure, but apparently differs in smaller size and much lower segment count.

Orthoporus bisulcatus Chamberlin

Orthoporus bisulcatus Chamberlin, 1952, Great Basin Natur., 12: 21. ♀ HT (FMNH) from Tejeria, Veracruz, Mexico.

Orthoporus bobos Chamberlin

Orthoporus bobos Chamberlin, 1952, Great Basin Nat., 12: 23. ♀ HT (FMNH) from Rio Bobos, Dept. Izabal, Guatemala.

Orthoporus boreus Chamberlin

Orthoporus boreus Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 55, fig. 69. ♀ HT (ANSP) ostensibly from the Snake River Desert at Taber, Bingham Co., Idaho. This locality is totally implausible and obviously the result of mislabeling. The species may not even be native to the area covered in this list.

Orthoporus canalis Chamberlin, 1925, Proc. Biol. Soc. Washington, 38: 38. ♀ HT (MCZ) from Barro Colorado Island, Canal Zone, Panama.

Range: Reported by Loomis from several places near the type locality.

Orthoporus capucinus (Attems)

Scaphiostreptus capucinus Attems, 1950, Ann. Naturh. Mus. Wien, 57: 234, fig. 54-56. ♂ HT (NMW) from "Mexico" without closer locality.

Orthoporus caelatus Loomis

Orthoporus caelatus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 38, figs. 16a, b. ♂ HT (USNM) from a site between Port Margo and Limbe, Haiti.

Orthoporus cavicollis (Karsch)

Spirostreptus (Nodopyge) cavicollis Karsch, 1881, Zeitschr. ges. Naturwiss., 54: 33. ♂ LT (ZMB) from Puerto Cabello, Venezuela.

Spirostreptus antillanus Pocock, 1894, Journ. Linnean Soc. London, 24: 483, pl. 38, fig. 1. ♂ LT (BMNH) from "St.Thomas". Synonymized by Hoffman, 1996.

Orthoporus grenadae Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 183. ♂ HT (MCZ) from Richmond Hill, Grenada. Synonymized with *antillanus* by Krabbe & Enghoff; 1985, with *cavicollis* by Hoffman, 1996.

Orthoporus antillanus: Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 182. – Krabbe & Enghoff, 1985, Ent. Scandinavica, 15: 333, figs. 1-8.

Gymnostreptus (Trinidadius) klagesi Verhoeff, 1941, Arch. Naturg., NF 10: 297, figs. 4, 5. ♂ HT (ZSBS) from Ceparo, Trinidad. Synonymized by Hoffman, 1996.

Orthoporus cavicollis: Hoffman, 1996, Mitt. Zool. Mus. Berlin, 72: 332, figs. 6-9. Designation and figures of lectotype.

Range: Probably native to the coastal region of Venezuela; reported from several of the Lesser Antilles (Grenada, Carriacou, Barbados) where quite possibly introduced and now naturalized. Pocock's early record for "St. Thomas" unquestionably represents a case of mislabeling.

Orthoporus chihuanus Chamberlin

Orthoporus chihuanus Chamberlin, 1947, Proc. Biol. Soc. Washington, 60: 11, fig. 0. ♀ HT (USNM) from Ciudad Chihuahua, Chihuahua, Mexico.

Suspected by both Causey and Loomis to be another junior synonym of *O. ornatus*.

Orthoporus chiriquensis Pocock

Orthoporus chiriquensis Pocock, 1909, Biol. Centr.-Amer., Diplop., p. 97, pl. VIII, fig. 2. ♂ HT (BMNH) from Volcán de Chiriqui, Prov. Chiriqui, Panama.

Orthoporus cienegonus Chamberlin

Orthoporus cienegonus Chamberlin, 1952, Great Basin Natur., 12: 23. ♂ HT (USNM) from Cienego de Flores, Nuevo León, Mexico.

Orthoporus cobanus Chamberlin

Orthoporus cobanus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 16, pl. 8, figs. 5-7. ♂ HT (USNM) from "Coban-Tache", Dept. Alta Verapaz, Guatemala.

Recorded in the original description from several localities in the southern part of Alta Verapaz. I have not located "Tache" and presume it to be a plantation somewhere close to Cobán. Loomis (1968: 98) gives the spelling as "Caché", which I have also failed to locate.

Orthoporus comminutus (Attems)

Scaphiostreptus comminutus Attems, 1950, Ann. Naturh. Mus. Wien, 57: 239, figs. 70, 71. ♂ HT (NMW) from "Mexico" without further locality.

Orthoporus comminutus: Loomis, 1968, Bull. U. S. Nat. Mus. 266: 99.

Orthoporus conifer (Attems)

Scaphiostreptus (Diaporus) conifer Attems, 1950, Ann. Naturh. Mus. Wien, 57: 243, figs. 77-79. ♂ HT (NMW) from "Pons, Costa Rica" (corrected by Loomis, 1974, to Volcán *Poas*, 20 km north of Alajuela, Prov. Alajuela).

Orthoporus conifer: Loomis, 1968, Bull. U. S. Nat. Mus. 266: 99.

The illustrations given by Attems for this species suggest a somewhat atypical element in the fauna of Central America and the type requires re-examination as a possibly mislabeled specimen of some extra-limital species.

Orthoporus cordovanus Pocock

Orthoporus cordovanus Pocock, 1909, Biol. Centr.-Amer., Diplop., p. 98, pl. VIII, fig. 3. ♂ HT (BMNH) from "Cordova", Mexico, presumably Córdoba, Veracruz.

Orthoporus discriminans Chamberlin

Orthoporus discriminans Chamberlin, 1922, Proc. U. S. Nat. Mus. 60(8): 16, pl. 8, figs. 1-4. ♂ HT (USNM) from Pancajché, Alta Verapaz, Guatemala.

Orthoporus dybasi (Chamberlin)

Scaphiostreptus dybasi Chamberlin, 1952, Great Basin Natur., 12: 28, fig. 16. ♂ HT (FMNH) from El Fortín de las Flores, Veracruz, Mexico.

Orthoporus dybasi: Causey, 1964, Proc. Biol. Soc. Washington, 77: 175.

Orthoporus esperanzae Chamberlin

Orthoporus esperanzae Chamberlin, 1943, Bull. Univ. Utah, 34(7): 13, fig. 5. ♀ HT (USNM) from Esperanza, Guanajuato, Mexico.

Orthoporus euthus Chamberlin

Orthoporus euthus Chamberlin, 1952, Great Basin Natur., 12: 25, fig. 12. ♂ HT (FMNH) from Tiquisate, Dept. Esquintla, Guatemala.

Orthoporus extensus Loomis

Orthoporus extensus Loomis, 1966, Ann. Entom. Soc. America, 59: 27, figs. 56, 57. ♂ HT (SMUK) from a site on Highway 185, 16 miles north of Matias Romero, Oaxaca, Mexico.

Orthoporus festae (Silvestri)

Plusioporus Festae Silvestri, 1896, Boll. Mus. Torino, 11(254): 3. ♂ HT (Mus. Zool. Anat. comp. Torino) from Punta Sabana, Prov. Darien, Panama.

Orthoporus festae: Pocock, 1909, Biol. Centr.-Amer. Diplop., p.102. – Loomis, 1961, Proc. U. S. Nat. Mus., 113: 114, fig. 7e.

Diaporus culebrae Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 18, pl. 8, figs. 8-9, pl. 9, fig. 1. ♂ HT (USNM) from "Canal Zone", Panama. Synonymized by Loomis, 1961.

Diaporus barroensis Chamberlin, 1925, Proc. Biol. Soc. Washington, 38: 39. ♀ HT (MCZ) from Barro Colorado Island, Canal Zone, Panama. Synonymized by Loomis, 1961.

Range: Loomis (1961) cites several localities in the Canal Zone, also Boquete, Juan Días, and Taboga Island, Panama.

Orthoporus flavior Chamberlin & Mulaik

Orthoporus flavior Chamberlin & Mulaik, 1941, Journ. New York Entom. Soc., 49: 63. Imm. ♂ HT (USNM) from four miles east of Dryden, Terrell Co., Texas. – Loomis, 1963, Journ. Kansas Entom. Soc., 36: 123, figs. 8-10. – Causey, 1975, Occ. Pap. Mus. Texas Tech Univ., 35: 7, figs. 3a, b.

Orthoporus pontis Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 53, fig. 66. F HT (ANSP) from "High Bridge", Pecos River, Val Verde Co., Texas. Synonymized with *punctilliger (= ornatus)* by Loomis, 1963; with *flavior* by Causey, 1975.

Range: Trans-Pecos Texas (Terrell, Crockett, and Val Verde cos.,) south to vicinity of Monterey, Nuevo León, Mexico (map, Causey, 1975, fig. 1)..

Orthoporus fraternus (DeSaussure)

Julus fraternus DeSaussure, 1860, Mém. Soc. Phys. Hist. nat. Genève, 15: 374, pl. 6, fig. 40. ♀ HT (MHNG) from Yautepec, Morelos, Mexico.

Orthoporus fraternus: Pocock, 1909, Biol. Centr.-Amer., Diplop., p. 101.

Orthoporus amulensis Pocock, 1909, Biol. Centr.-Amer., Diplop., p. 98, pl. VIII, fig. 5. ♂ HT (BMNH) from Amula, Guerrero, Mexico. Synonymized by Causey, 1964.

Orthoporus morelus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 16, figs. 16, 17. ♀ HT (USNM) from Tepoztlan, Morelos, Mexico. Synonymized by Causey, 1964.

Range: South-central Mexico: Morelos, Oaxaca, Veracruz, Puebla.

Orthoporus gracilior Chamberlin

Orthoporus gracilior Chamberlin, 1952, Great Basin Natur., 12: 25, fig. 13. ♂ HT (FMNH) from Volcán Tajumulco, Dept. San Marcos, Guatemala.

Orthoporus guerreronus (Chamberlin)

Gymnostreptus guerreronus Chamberlin, 1942, Bull. Univ. Utah, 33(4): 8, figs. 1, 2. ♂ HT (?USNM) from Cueva de Jutxlahuaca at Colotlipa, Guerrero, Mexico.

Orthoporus guerreronus: Chamberlin, 1943, Bull. Univ. Utah, 34(7): 13.

Chamberlin (1942: 3) stated that the types of species described in that paper were returned to the Escuela Nacional de Ciencias Naturales, Mexico City, but he often forgot such committments and the actual deposition requires confirmation, starting at USNM.

Orthoporus haitiensis Chamberlin

Orthoporus haitiensis Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 183. ♂ HT (MCZ) from St. Marc, Haiti. – Loomis, 1936, Bull. Mus. Comp. Zool., 80: 36, fig. 15.

Range: Known from three adjacent sites in Haiti.

Orthoporus hoctunicolens Chamberlin

Orthoporus hoctunicolens Chamberlin, 1938, Publ. Carnegie Inst. Washington, 491: 170, fig. 18. ♀ HT (USNM) from Hoctun Cave, Hoctun, Yucatan, Mexico.

Orthoporus kiemi Loomis

Orthoporus kiemi Loomis, 1962, Proc. Biol. Soc. Washington, 75:48, figs. 1-3. ♂ HT (USNM) from cave on Hacienda San Bernardo, five miles from San Bernardo on the railroad between Merida and Maxcanu, Yucatan, Mexico.

Orthoporus leius Chamberlin

Orthoporus leius Chamberlin, 1943, Bull. Univ. Utah, 34(7): 14, fig. 7. ♀ HT (USNM) from Esperanza, Guanajuato, Mexico.

Orthoporus leonicus Chamberlin

Orthoporus leonicus Chamberlin, 1941, Ent. News, 52: 252., fig. 8. ♀ HT (USNM) from Ojo de Agua, Sabinas Hidalgo, Nuevo León, Mexico.

Range: Reported also from Garcia, Nuevo Leon., and Xilitla, San Luis Potosí.

Considered by Loomis (1963) to be probably a synonym of *O. ornatus*.

Orthoporus luchilicolens Chamberlin

Orthoporus luchilicolens Chamberlin, 1938, Publ. Carnegie Inst. Washington, 491: 169, figs. 14, 15. ♀ HT (USNM) from Luchil Cave at Tixcacal, Yucatan.

Orthoporus margarites Chamberlin

Orthoporus margarites Chamberlin, 1946, Pan-Pacific Entom., 22: 146. HT (USNM) from Isla San José, Archipielago de las Perlas, Prov. Panama, Panama.

Orthoporus mimus Chamberlin

Orthoporus mimus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 15, figs. 13, 14. ♂ HT (USNM) from 19 miles north of El Limón, Tamaulipas, Mexico.

Orthoporus linares Chamberlin, 1943, Bull. Univ. Utah, 34(7): 15, figs. 8, 9. ♂ HT (USNM) from Linares, Nuevo León, Mexico. Synonymized by Causey, 1975.

Orthoporus lenonus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 14, figs. 11, 12. ♂ HT (USNM) from Two miles north of Lenon, Tamaulipas, Mexico. Synonymized by Causey, 1975.

Range: A small area in southern Tamaulipas, eastern San Luis Potosí, eastern Nuevo León (map, Causey, 1975, fig. 1).

Loomis (1966) considered *mimus, linares,* and *lenonus* to be synonyms of *O. ornatus.*

Orthoporus montezumae (DeSaussure)

Julus montezumae DeSaussure, 1859, Linnaea Entom., 13: 329; 1860, Mém. Soc. Phys. Hist. nat. Genève, 15: 374, pl. VI, fig. 39. ST (MHNG) from Orizaba, Veracruz, Mexico.

Orthoporus montezumae: Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 99.

Examination of male type material in the Geneva museum will surely result in another consolidation of more recently published names based on spirostreptids from Veracruz and or Puebla.

Orthoporus mundus Chamberlin

Orthoporus mundus Chamberlin, 1942, Proc. Biol. Soc. Washington, 55: 60. ♀ HT (USNM) from Apatzingan, La Majada, Michoacan, Mexico.

Orthoporus nesiotes Chamberlin

Orthoporus nesiotes Chamberlin, 1923, Proc. California Acad. Sci., 12: 405, fig. 39,40. ♂ HT (CAS) from Tiburon Island, Sonora, Mexico.

This name has quite reasonably suspected by both Loomis (1963) and Causey (1975) to be a junior synonym of *O. ornatus.*

Orthoporus nodosus Loomis

Orthoporus nodosus Loomis, 1974, Florida Entom., 57: 185, fig. 28. ♂ HT (FSCA) from Finca Las Cruces at San Vito, Prov. Puntarenas, Costa Rica.

Orthoporus omalopyge (Brolemann)

Spirostreptus (Scaphiostreptus) omalopyge Brolemann, 1905, Ann. Soc. ent. France, `74: 365, fig. 19. ST (MHNP) from three localities in Costa Rica; La Palma was specified by Loomis (1968) but this should be validated by designation of a lectotype from that place, identified for me by Prof. Monge-Najera as just south of Cariblanco on Hy. 9, Prov. Alajuela.

Range: Recorded from La Palma (84.10 W,10.10 N), Carillo, Cache (?Cachi), and El Gallito, Costa Rica.

Orthoporus ornatus (Girard)

Julus ornatus Girard, 1853, in Marcy, Exploration of the Red River of Louisiana in 1852, Appendix F, p. 274. Type material not known to exist, from "Prairiedog Town River"; type locality restricted by Causey (1954) to Palo Duro State Park, Randall Co., Texas. ♂ neotype (USNM).

Spirostreptus montezumae (nec DeSaussure) Bollman, 1888, Proc. U. S. Nat. Mus., 11: 343.

Spirobolus miles Chamberlin, 1918, Pomona College Journ. Ent. Zool., 10: 11. ♀ HT (MCZ) from Fort Grant, Graham Co., Arizona (the published locality "Ft. Boutelle" was a *lapsus calami*, repeating the name of the collector). **New Synonymy!**

Orthoporus punctilliger Chamberlin, 1923, Proc. California Acad. Sci., 12: 405, fig. 41. ♂ HT (CAS), from San Pedro Bay, Sonora, Mexico. Synonymized by Causey, 1964.

Orthoporus wichitanus Chamberlin, 1931, Ent. News, 42: 99, pl. 2, fig. 2. ♂ HT (USNM) from Elk Mountain, Wichita Reserve, Comanche Co., Oklahoma. Synonymized by Causey, 1964.

Orthoporus entomacis Chamberlin & Mulaik, 1941, Journ. New York Entom. Soc., 49: 63. ♀ HT (USNM) from Duncan, Greenlee Co., Arizona. **New Synonymy!**

Orthoporus vallicolens Chamberlin, 1943, Proc. Biol. Soc. Washington, 56: 149, fig. 15. ♀ HT (USNM) from Fort Hancock, Hudspeth Co., Texas. Synonymized by Causey, 1964.

Orthoporus torreonus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 14, fig. 18. ♀ HT (USNM) from 20 miles southwest of Torreon, Coahuila, Mexico. Synonymized by Loomis, 1966.

Orthoporus producens Chamberlin, 1947, Proc. Biol. Soc. Washington, 60: 11, fig. 8. ♀ HT (USNM) from Benson, Cochise Co., Arizona. Synonymized by Loomis, 1963.

Scaphiostreptus caperanus Attems, 1950, Ann. Naturh. Mus. Wien, 57: 241. ♂ HT (NMW) supposedly from Honolulu. Synonymized by Hoffman, 1997.

Orthoporus crotonus Chamberlin, 1952, Great Basin Natur., 12: 24. ♀ HT (FMNH) from Croton Springs, Brewster Co., Texas. Synonymized by Loomis, 1963.

Orthoporus arizonicus Loomis, 1953, Journ. Washington Acad. Sci., 43: 418, figs. 4, 5. ♀ HT (USNM) from Patagonia, Santa Cruz Co., Arizona. Synonymized by Causey, 1964.

Orthoporus ornatus: Causey, 1954, Tulane Stud. Zool., 2: 67, fig. 10; 1975, Occ. Pap. Mus. Texas Tech Univ., 35: 6, figs. 2a-b.

Range: Arizona, New Mexico, western half of Texas, south and east through Mexico to northern San Luis Potosí (map, Causey, 1975, fig. 1).

Orthoporus palmensis (Brolemann)

Spirostreptus (Scaphiostreptus) typopopyge palmensis Brolemann, 1905, Ann. Soc. entom. France, 74: 363, text fig. VI, pl. 9, fig. 18. ♂ HT (MHNP) from La Palma, Prov. Guanacaste, Costa Rica.

Orthoporus palmensis: Pocock, 1909, Biol. Centr.-Amer., Diplop., p. 96.

Orthoporus paxillicauda Loomis

Orthoporus paxillicauda Loomis, 1962, Proc. Biol. Soc. Washington, 75: 50, figs. 4-6. ♀ HT (USNM) from Zapotilla, Dept. Izabal, Guatemala.

Orthoporus reimoseri (Attems), new status!

Scaphiostreptus rugiceps reimoseri Attems, 1950, Ann. Naturh. Mus. Wien, 57: 241, figs. 74, 75. ♂ HT (NMW) from Bebedero, 10 km southwest of Cañas, Prov. Guanacaste, Costa Rica.

Orthoporus rodriguezi (Brolemann)

Spirostreptus rodriguezi Brolemann, 1900, Mém. Soc. zool. France, 13: 104, figs. 47, 58. ♂ HT (MHNP) from Guatemala, without further locality.

Orthoporus rodriguezi: Pocock, 1909, Biol. Centr.-Amer., Diplop., p. 103.

Orthoporus rugiceps (Attems)

Scaphiostreptus rugiceps Attems, 1950, Ann. Naturh. Mus. Wien, 57: 240, figs. 72, 73. ♂ HT (NMW) from "Mexico" without further locality.

Orthoporus salvadoricus (Kraus)

Scaphiostreptus (Scaphiostreptus) salvadoricus: Kraus, 1954, Senckenb. biol. 35: 337, figs. 83. ♂ HT (SMF) from La Rábida, Dept. San Salvador, El Salvador.

Orthoporus salvadoricus: Loomis, 1968, Bull. U. S. Nat. Mus., 226: 103.

Range: Recorded by Kraus (1954) from five departments in El Salvador.

Orthoporus sanctus Chamberlin

Orthoporus sanctus Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 55, fig. 68. ♀ HT (ANSP) , labeled St. Augustine, Florida.

The ostensible type locality is of course totally implausible, unless the specimen was found there in bananas or other plant material from the tropics. In the absence of male specimens, even the generic assignment is open to question.

Orthoporus sculpturatus (Karsch)

Spirostreptus (Nodopyge) sculpturatus Karsch, 1881, Zeitschr. ges. Naturwiss., 54: 39. ST (ZMB) from "Porto Rico" without further locality.

Spirostreptus (Nodopyge) sculpturatus var. *albulus* Karsch, 1881, Zeitschr. ges. Naturwiss. 54: 40. ♂ HT (ZMB) from "Porto Rico".

Spirostreptus sculpturatus: Pocock, 1894, Journ. Linnean Soc. London, 24: 482.

Orthoporus sculpturatus: Silvestri, 1908, Bull. American Mus. Nat. Hist., 24: 573, figs. VIII, 1-5.

Attention is here directed to the striking similarity in gonopod structure between *sculpturatus* as drawn by Silvestri (1908: fig. VIII) and the Central American *O. rugifer* Attems (1950: fig. 73). I do not imply synonymy of these names, but suggest that a comparison of specimens might prove to be instructive.

Orthoporus solicolens Chamberlin

Orthoporus solicolens Chamberlin, 1938, Publ. Carnegie Inst. Washington, 491: 170, figs. 16, 17. ♀ HT (USNM) from Hoctun Cave, Yucatan, Mexico.

Orthoporus striatulus Pocock

Orthoporus striatulus Pocock, 1909, Biol. Centr.-Amer., Diplop., p. 99, pl. VIII, fig. 1. ♂ HT (BMNH) from "Tuxtla, Mexico", correctly identified as Tuxtla Gutiérrez, Chiapas by Causey, 1964.

Orthoporus chiapasus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 12, fig. 4. ♀ HT (USNM) from Huixla, Chiapas, Mexico. Synonymy implied by Causey, 1964, endorsed here.

Range: Numerous localities in Chiapas and Oaxaca (Causey, 1964).

Orthoporus teapensis Pocock

Orthoporus teapensis Pocock, 1909, Biol. Centr.-Amer., Diplop., p. 97, pl. VIII, fig. 4. ♂ HT (BMNH) from Teapa, Tabasco, Mexico.

Range: Causey (1964) gives numerous localities in Oaxaca and Chiapas

Orthoporus tehuacanus Chamberlin

Orthoporus tehuacanus Chamberlin, 1952, Great Basin Natur., 12: 26. ♀ HT (FMNH) from Tehuacan, Puebla, Mexico.

Orthoporus texicolens Chamberlin

Orthoporus texicolens Chamberlin, 1938, Proc. Biol. Soc. Washington, 51: 207. ♂ HT (USNM) from Edinburg, Hidalgo Co., Texas. – Causey, 1975, Occ. Pap. Mus. Texas Tech Univ., 35: 8, figs. 4, 5.

Orthoporus victorianus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 18, figs. 20-23. ♂ HT (USNM) from three miles south of Victoria, Tamaulipas, Mexico. Synonymized by Causey, 1964.

Range: Gulf Coastal Plain, from Bexar and San Patricio counties, Texas, to vicinity of El Mante, Tamaulipas (map, Causey, 1975, fig. 1).

Orthoporus tizamensis Chamberlin

Orthoporus tizamensis Chamberlin, 1938, Publ. Carnegie Inst. Washington, 491: 168, figs. 11-13. ♀ HT (USNM) from Muruztum Cave at Tizamin, Yucatan, Mexico.

Orthoporus torreonus Chamberlin

Orthoporus torreonus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 16, fig. 18. ♀ HT (USNM) from 20 miles southwest of Torreon, Coahuila, Mexico.

Range: Several localities west and southwest of Torreon.

Orthoporus triquetrus Loomis

Orthoporus triquetrus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 37. ♀ HT (MCZ) from San Lorenzo, Samana Bay, Republica Dominicana.

Is this name possibly based upon an established population of some South American spirostreptid?

Orthoporus trisulcatus (Daday)

Spirostreptus trisulcatus Daday, 1889, Természetr. Füz., 12: 127. ♀ HT (HNHM) from Panama, without further locality.

One of the very few Mesamerican species omitted from the *Biologia Centrali-Americana*..

Orthoporus vialis Loomis

Orthoporus vialis Loomis, 1974, Florida Entom., 57: 185, fig. 29. ♂ HT (FSCA) from along Inter-American Highway, on south slope of Cerro de la Muerte at 5000 ft., Prov. San José, Costa Rica.

Orthoporus zizicolens (Chamberlin)

Gymnostreptus zizicolens Chamberlin, 1938, Publ. Carnegie Inst. Washington, 451: 168, fgis. 6-10. ♂ HT (USNM) from Ziz Cave at Oxkutzcab, Yucatan, Mexico.

SPIROSTREPTIDAE OF UNCERTAIN STATUS

Inlus [*sic* = **Iulus**] **multiannulatus** McNeill, 1887, Proc. U. S. Nat. Mus., 10: 331. Type specimen, of unknown sex, not known to exist, published type locality extremely dubious.

The brief original description clearly portrays a large spirostreptoid, but provides very little detail upon which to hazard a guess about its identity. McNeill stated that "The specimen which furnished this description was found by the children of Mr. Justus M. T. Myers, near Fort Madison, Iowa." That no other spirostreptids have ever been found north of Oklahoma essentially rules out *Orthoporus ornatus* - the nearest known native species - as does the coloration. Assuming the quoted sentence to be accurate, one can only surmise that the milliped must have come to southeastern Iowa adventitiously, perhaps through some agricultural product or ornamental plants. Lacking the type specimen, the identity of this name can probably never be ascertained.

Order Julida

The classification of this large and diverse taxon has undergone extensive revision during the past two decades, particularly through the initiative of Henrik Enghoff, whose many innovations have been accepted mostly *in toto* in the following pages as "state of the art knowledge". This does not imply complete personal agreement, since many of the higher categories which Dr. Enghoff has defined are based on characters having what I would regard as minor systematic importance. Nonetheless, the groups are cladistically monophyletic, and the question about their relative ranking can be settled some day by a consensus. In the following account, superfamilies are understood to be "*sensu* Enghoff, 1991" except for Paeromopodoidea, later expanded by the addition of the Aprosphylosomatidae.

As I pointed out in 1980, the traditional distinction between the groups lately considered as orders Julida and Spirostreptida has become increasingly blurred, and the gnathochilarial configuration of julids should probably be assigned a more subordinate role in view of the near structural identity in the gonopods of nemasomatid "julids" and cambalid "spirostreptids", generalized members of their respective taxa..

One logical option might be to combine both groups at the level of suborders under a comprehensive Julida, in effect a return to the system proposed by Cook in 1895. Since the concepts "Oncophora" and "Arthrophora" of Verhoeff have been abandoned, as subordinal taxa, in favor of a number of superfamilies, the suborder category is currently vacant anyhow.

Superfamily Nemasomatoidea

Family Nemasomatidae Bollman

Nemasominae Bollman, 1893, Bull. U. S. Nat. Mus. 46: 156.

Isobatidae Cook, 1895, Ann. New York Acad. Sci., 9: 6.

Nemasomatini Hoffman, 1980, Classification of the Diplopoda, p. 106 (in part).

Nemasomatidae Enghoff, 1985. Entom. Scandinavica, 16: 29 (revision); 1991, Zeitschr. Zool. Syst. Evolut. Forsch., 29: 260 (relationships).

Seven genera, Palearctic and Nearctic regions.

Genus **Orinisobates** Lohmander

Orinisobates Lohmander, 1932, Ark. Zool., 25 A (6): 59 (as subgenus of *Isobates).* Type species: *Isobates (Orinisobates) kasakstanus* Lohmander, by monotypy. – Hoffman, 1966, Radford Review, 20: 166. – Enghoff, 1985, Entom. Scandinavica, 29: 43 (revision).

Heterisobates Verhoeff, 1933, Ark. Zool., 26A (10): 37. Type species: *H. gracilis* Verhoeff, by monotypy. Synonymized by Verhoeff, 1937.

Tiviulus Chamberlin, 1941, Bull. Univ. Utah, 31 (11): 17. Type species: *T. expressus* Chamberlin, by original designation. Synonymized by Hoffman, 1966.

Mimolene Chamberlin, 1941, Bull. Univ. Utah, 31(12): 3. Type species: *M. oregona* Chamberlin, by original designation. Synonymized by Hoffman, 1980.

Utoiulus Chamberlin, 1943, Proc. Biol. Soc. Washington, 56: 145. Type species: *Nemasoma uta* Chamberlin, 1912. Synonymized by Hoffman, 1966.

Eight species: Nearctic region (three species) and eastern Palearctic (five).

Orinisobates expressus (Chamberlin)

Tiviulus expressus Chamberlin, 1941, Bull. Univ. Utah, 31(11): 17, figs. 27, 28. ♂ HT (USNM) from Arlington, Snohomish Co., Washington. – Hoffman, 1964, Trans. American Entom. Soc., 89: 177, figs. 1, 2, 5, 6, 9, 10, 11, 14, 20.

Mimolene oregona Chamberlin, 1941, Bull. Univ. Utah, 31(12): 3, fig. 1. ♂ HT (USNM) from Washington County, Oregon, without closer locality. Placed in *Orinisobates* by Hoffman, 1980, synonymized with *expressus* by Enghoff, 1985.

Nemasoma leechi Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc., 87: 10, fig. 20. ♂ HT (Prov. Mus. Victoria) from Trinity Valley, ca. four miles north of Lumby, British Columbia. Synonymized by Hoffman, 1964.

Mimolene sectile Loomis & Schmitt, 1971, Northwest Sci., 45: 119, figs. 7, 8. ♂ HT (USNM) from north side Middle Thompson Lake, Lincoln Co., Montana. Synonymized by Enghoff, 1985.

Orinisobates expressus: Hoffman, 1966, Radford Review, 20: 178. – Enghoff, 1985, Entom. Scandivanica, 16: 60, figs. 67, 76-79.

Range: Northern California to British Columbia, northern Idaho and Montana, westernmost Alberta (map, Enghoff, 1985, fig. 67).

Orinisobates nigrior (Chamberlin)

Nemasoma nigrius Chamberlin, 1943, Bull. Univ. Utah, 34(7): 9, fig. 22. ♂ HT apparently lost (not at FMNH), ♂ topoparatype (USNM), from Gatlinburg, Sevier Co., Tennessee.

Orinisobates nigrius [sic!]: Hoffman, 1966, Radford Review, 20: 178, figs. 3, 4.

Orinisobates nigrior: Enghoff, 1985, Entom. Scandinavica, 16: 56, figs. 1, 34, 37-42, 64-67.

Range: Southern Appalachians, also western Florida and southern Illinois (map, Enghoff, 1985, fig. 67).

Orinisobates utus (Chamberlin)

Nemasoma uta Chamberlin, 1912, Ann. Entom. Soc. America, 5: 162. Original types lost, from Mill Creek Canyon, Salt Lake Co., Utah.

Tiviulus utus: Hoffman, 1964, Trans. American Entom. Soc., 89: 177, figs. 3, 8, 13, 20.

Orinisobates utus: Hoffman, 1966, Radford Review, 20: 178. – Enghoff, 1985, Entom. Scandinavica, 16: 57, figs. 67-75.

Range: Idaho and adjoining parts of Utah, Wyoming, and Washington (map, Enghoff, 1985, fig. 67).

Genus **Thalassisobates** Verhoeff

Thalassisobates (as subgenus of *Isobates)* Verhoeff, 1908, Zool. Anz., 32: 488. Type species: *Isobates (Thalassisobates) adriaticus* Verhoeff, by subsequent designation of Jeekel, 1971).

Halisobates Verhoeff, 1913, Zool. Anz., 43: 151. Type species: *Isobates adriaticus* Verhoeff, 1908, by monotypy.

Thalassisobates Verhoeff, 1911, Zool. Anz., 38: 540. – Enghoff, 1985, Entom. Scandinavica, 16: 37.

One species: Western Europe, along the seacoasts; also east coast of North America (?introduced).

Thalassisobates littoralis (Silvestri)

Isobates littoralis Silvestri, 1903, in: Berlese, Acari, Myriapoda et Scorpiones. . .in Italia reperta, fasc. XCIX, 9, figs. 1-10. Location of type material unknown, from Portici, Campania, Italia.

Thalassisobates littoralis: Enghoff, 1985, Entom. Scandinavica, 16: 37, figs. 19, 23; 1987, Entom. Month. Mag.123: 205-06.

Range: Coastal parts of western Europe, from England and Sweden to north Africa and Yugoslavia; also recorded from "Massachusetts" and Virginia (Enghoff, 1987).

The material labeled "Massachusetts" in the Verhoeff Collection (ZSBS) probably originated with Charles H. Blake (Cambridge, Massachusetts), who sent material of isopods and diplopods to Verhoeff in the early 1930s. Enghoff's 1987 record was based on specimens taken at Chincoteague Island, Accomack Co., Virginia. At present it is conjectural whether *littoralis* occurs in North America as an endemic or an anthropochoric species.

Family Telsonemasomatidae Enghoff

Telsonemasomatidae Enghoff, 1991, Zeitschr. Zool. Syst. Evolut.-forsch. 29: 259.

One genus, northwestern United States.

Genus **Telsonemasoma** Enghoff

Telsonemasoma Enghoff, 1979, Steenstrupia, 5: 149. Type species: *T. microps* Enghoff, by original designation.

One species: Oregon.

Telsonemasoma microps Enghoff

Telsonemasoma microps Enghoff, 1979, Steenstrupia, 5: 149, figs. 1-13. ♂ HT (ZMUC) from Missouri Bend Recreation Area, Benton Co., Oregon.

Range: Known only from two localities in Benton Co., Oregon.

Family Chelojulidae Enghoff

Chelojulidae Enghoff, 1991, Zeitschr. Zool. Syst. Evolut. Forsch. 29: 259.

One genus, northwestern United States.

Genus **Chelojulus** Enghoff

Chelojulus Enghoff, 1982, Myriapodologica, 1: 70. Type species: *C. sculpturatus* Enghoff, by original designation.

One species, Idaho.

Chelojulus sculpturatus Enghoff

Chelojulus sculpturatus Enghoff, 1982, Myriapodologica, 1: 70, figs. 1-17. ♂ HT (FSCA) from French Mountain road, five miles north of Pierce, Clearwater Co., Idaho.

Range: Clearwater, Latah, and Idaho counties, Idaho.

Superfamily Blaniuloidea C. L. Koch

Blaniuloidea + Zosteractoidea Mauries, 1970,

Family Zosteractinidae Loomis

Zosteractiidae Loomis, 1943, Bull. Mus. Comp. Zool., 92: 393.

Zosteractininae +Ameractini Hoffman, 1980, Classification of the Diplopoda, p.107.

Zosteractinidae Enghoff, 1982, Entom. Scandanavica, 13: 405 (revision).

Two genera, eastern North America.

Genus **Ameractis** Causey

Ameractis Causey, 1959, Journ. Tennessee Acad. Sci., 34: 232. Type species: *Ameractis satis* Causey, by original designation. – Enghoff, 1982, Entom. Scandinavica, 13: 407.

Two species: eastern United States.

Ameractis chirogona Enghoff

Ameractis chirogona Enghoff, 1982, Entom. Scandinavica, 13: 407, figs. 3, 9, 12, 13, 19, 22-24. ♂ HT (MCZ) from 4.6 miles south of Gatlinburg, Sevier Co., Tennessee.

Ameractis satis Causey

Ameractis satis Causey, 1959, Journ. Tennessee Acad. Sci., 34: 232, figs. 3-5. ♂ HT (AMNH) from Indian Cave, White Co., Tennessee. – Hoffman, 1964, Trans. American Entom. Soc., 89: 181, figs. 15-19. – Enghoff, 1982, Entom. Scandinavica, 12: 412, figs. 2, 4-8, 13, 20-22, 25, 26.

Range: Caves in the Cumberland Plateau, Tennessee and Alabama, also southern Appalachians in western North Carolina (map, Enghoff, 1982, fig. 13) and southwestern Virginia..

Genus **Zosteractis** Loomis

Zosteractis Loomis, 1943, Bull. Mus. Comp. Zool., 92: 395. Type species: *Z. interminata* Loomis, by original designation.– Enghoff, 1982, Entom. Scandinavica, 12: 405.

One species, central United States.

Zosteractis interminata Loomis

Zosteractis interminata Loomis, 1943, Bull. Mus. Comp. Zool., 92: 395, figs. 11a-i. ♂ HT (MCZ) from South Rankin Cave, four miles east of Eureka, St. Louis Co., Missouri. – Enghoff, 1982, Entom. Scandinavica, 12: 405, figs. 1, 10, 11, 13-18.

Range: Caves along the Mississippii River in eastern Missouri and western Illinois (map, Enghoff, 1982, fig. 13).

Family Okeanobatidae Verhoeff

Okeanobatinae Verhoeff, 1942, Zool. Anz., 137: 208.

Okeanobatini Hoffman, 1980, Classification of the Diplopoda, p. 107.

Okeanobatidae Enghoff, 1985, Entom. Scandinavica, 16: 64.

Two (?one) genera, eastern United States, Japan.

Genus **Okeanobates** Verhoeff

Okeanobates Verhoeff, 1939, Zool. Anz., 127: 280. Type species: *O. serratus* Verhoeff, by monotypy. – Enghoff, 1979, Steenstrupia, 5: 162.

Two species: Japan; eastern United States.

Okeanobates americanus Enghoff

Okeanobates americanus Enghoff, 1979, Steenstrupia, 5: 162, figs. 1-9. ♀ HT (USNM) from U.S. Hy. 25-70, nine miles north of Hot Springs, Madison Co., North Carolina.

Range: Appalachian region from Quebec to Great Smoky Mountains, North Carolina-Tennessee.

Family Blaniulidae C. L. Koch

Blaniuliden C. L. Koch, 1847, Syst.der Myriapoden, in Krit. Rev. Insectenf. Deutschlands,

Blaniulidae Cook, 1895, Ann. New York Acad. Sci., 9: 5 – Brolemann, 1923, Arch. Zool. exp. gen. 61: 99. – Mauries, 1970, Ann. Spéléol., 25: 716. – Enghoff, 1991, Zeitschr. zool. Syst. Evol.- forsch. 29: 259.

Four subfamilies and twenty genera, dominantly Palaearctic, some genera represented anthropochoristically in the New World, one genus presumed endemic in southeastern North America.

Subfamily Blaniulinae C. L. Koch

Mauries, 1970, Ann. Spéléol., 25: 716. – Enghoff, 1984, Senckenb. biol. 64: 396.

Twelve genera, two of which are represented in the New World by an introduced species.

Genus **Archiboreoiulus** Brolemann

Archiboreoiulus Brolemann, 1921, Arch. Zool. expér. gén., 60, Notes & Revue, 1: 9. Type species: *A. sollaudi* Brolemann, by original designation.

Two species, endemic to the western Palearctic region, one of them introduced into North America.

Archiboreoiulus pallidus (Brade-Birks)

Proteroiulus pallidus Brade-Birks, 1920, Ann. & Mag. Nat. Hist. (9) 6: 364, fig. 1. Type material (?BMNH) from Wye, Kent, Great Britain.

Archioboreoiulus pallidus: Brolemann, 1923, Arch. Zool. expér. gén. 61: 328. – Shelley, 1988, Canadian Journ. Zool., 66: 1645.

Range: Western Europe, southern Russia. Introduced into North America (e.g., Ontario, Canada, North Dakota, USA).

Genus **Blaniulus** Gervais

Blaniulus Gervais, 1836, L'Institut, (1) 4: 435. Type species: *Julus guttulatus* Fabricius, by monotypy.

Typhloblaniulus Verhoeff, 1897, Verh. Naturh. Ver. Preuss. Rheinland, 53: 211. Type species: *Julus guttulatus* "Bosc" (= Fabricius), by subsequent monotypy (Verhoeff, 1898).

Plusioiulus (as subgenus of *Blaniulus)* Silvestri, 1903, in Berlese: Acari, Myriapoda et Scorpiones hucusque in Italia reperta, 99, 5. Type species: *B. (P.): eulophus* Silvestri, by original designation.

Ten species, endemic to the western Palearctic, one nearly cosmopolitan as anthropochore.

Blaniulus guttulatus (Fabricius)

Julus guttulatus Fabricius, 1798, Supplementum Entomologiae Systematicae, p. 289. Type material not known to exist, type locality "France".

Blaniulus guttulatus: Gervais, 1836, L'Institut, (1): 4: 435. – Brolemann, 1923, Arch. Zool. Expér. Gén. 61: 300, figs. 284-309.

Range: Western Europe. Introduced with plant material into many parts of the world, including urbanized and cultivated areas in North America where established and nearly ubiquitous.

Genus **Proteroiulus** Silvestri

Proteroiulus Silvestri, 1897, Ann. Mus. Civ. Stor. Nat. Genova, 38: 650. Type species: *Blaniulus fuscus* Am Stein, 1857). – Brolemann, 1923, Arch. Zool. Gén. Expér., 61: 340.

Three species in western Europe, one of them introduced into North America.

Proteroiulus fuscus (Am Stein)

Blaniulus fuscus Am Stein, 1857, Jahresb. Naturf. Ges. Graubündens, n.s. 2: 139.

Proteroiulus fuscus: Silvestri, 1897, Ann. Mus. Civ. Stor. Nat. Genova, 38: 650. – Jawlowski, 1939, Frag. Faun. Zool. Mus. Polonici, 4: 152. – Palmén, 1952, Ann. Soc. Zool. Vanamo, 15(1): 17, fig. 21.

Range: Widespread in western Europe, known in North America from Newfoundland, Nova Scotia, and many urban localities in eastern United States.

Subfamily Choneiulinae Brolemann

Choneiulini Brolemann, 1921, Arch. Zool. Expér. Gén., 60 (Notes & Revue): 4.

Choneiulinae Mauriès, 1970, Ann. Spéléol., 25: 717. – Enghoff, 1984, Senckenberg. biol., 64: 395.

Four genera, western Europe, one represented by an anthropochoric species in North America.

Genus **Choneiulus** Brolemann

Choneiulus Brolemann, 1921, Arch. Zool. Expér. Gén. 60 (Notes & Revue): 4. Type species: *Blaniulus palmatus* Némec, 1895, by subsequent designation of Brolemann, 1923. – Enghoff, 1984, Steenstrupia, 10: 194 (revision).

Four species: Western Europe, Tunisia, Canary Islands; one introduced by commerce into North America.

Choneiulus palmatus (Némec)

Blaniulus palmatus Némec, 1895, Sitzungsber. K. Böhm. Ges. Wien, 1895 (38): 5, figs. 7-11. Location of type material unknown, from Czechoslovakia ("Böhmien").

Choneiulus palmatus: Brolemann, 1921, Arch. Zool. Expér. Gén. 60 (Notes & Revue): 4. – Enghoff, 1984, Steenstrupia, 10: 198, figs. 1-3, 15, 17-18.

Range: Western Europe (extensively synanthropic and original area uncertain); introduced and established in North America from Nova Scotia to Washington and California, unknown south of Pennsylvania.

Subfamily Nopoiulinae Verhoeff

Nopoiulini Verhoeff, 1911, Zool. Anz., 38: 538.

Bilselibatinae Verhoeff, 1940, Rev. Fac. Sci. Univ. Istanbul, [B] 5: 2.

Nopoiulinae Mauriès, 1970, Ann. Spéléol. 25: 711. – Enghoff, 1984, Senckenb. biol., 64: 396 (revision).

Four genera, two in eastern Europe and northwestern Asia (one with a widely dispersed synanthropic species); one in eastern North America.

Genus **Nopoiulus** Menge

Nopoiulus Menge, 1851, Neueste Schrift. Naturf. Ges. Danzig, (4) 4: 7. Type species: *N. punctulatus* Menge, 1851, by monotypy. – Enghoff & Shelley, 1979, Entom. Scandinavica 10: 65 (revision).

11 species, dispersed among three subgenera, Europe, southwestern Asia. One species of the nominate subgenus synanthropically introduced elsewhere, including North America.

Nopoiulus (Nopoiulus) kochii (Gervais)

Julus pulchellus C. L. Koch, 1838, Crustaceen, Myriapoden, und Arachniden Deutschlands, 22: pl. 13. Type material not known to exist, probably from Regensburg, Bayern, Germany. Preoccupied by *Julus pulchellus* Leach, 1815.

Blaniulus venustus Meinert, 1868, Naturhst. Tidsskr. (3) 5: 20. ST (ZMUC) from sixl localities in Denmark (Enghoff & Shelley, 1979, designated a ♀ lectotype but did not mention its locality).

Iulus Kochii Gervais, 1847, in: Walckenaer & Gervais, Hist. Nat. Insectes Apt., 4: 145.

Nopoiulus (Nopoiulus) kochii: Enghoff, 1984, Senckenb. biol., 64: 408, figs. 2-=23.

Range: Europe, Asia Minor; northeastern North America (Nova Scotia south to Virginia); Washington state; Peru; Chile; Juan Fernandez Islands; New Zealand.

Genus **Virgoiulus** Enghoff

Virgoiulus Enghoff, 1984, Senckenb. biol. 64: 399. Type species: *Julus minutus* Brandt, 1841, by original designation.

One species, eastern North America.

Virgoiulus minutus (Brandt)

Julus pusillus Say, 1821, Journ. Acad. Nat. Sci. Philadelphia, 2: 105 (preoccupied by *Julus pusillus* Leach, 1815). ♀ HT (BMNH) from "eastern shore of Virginia"

Julus minutus Brandt, 1841, Bull. Sci. Acad. Imp. St. Petersbourg, 8: 104 (new name for *J.minutus* Say, 1821).

Julus Sayi Newport, 1844, Ann. Mag. Nat. Hist., 13: 268 (new name for *Julus pusillus* Say, 1821). Objective junior synonym of *Julus minutus* Brandt.

Julus lineatus McNeill, 1887, Proc. U. S. Nat. Mus., 10: 324. Type material apparently lost, from Pensacola, Escambia Co., Florida. Synonymized by Bollman, 1893.

Nopoiulus minutus: Chamberlin, 1922, Proc. Biol. Soc. Washington, 35: 9. – Enghoff & Shelley, 1979, Entom. Scandinavica, 10: 66, figs. 2, 5-12

Virgoiulus minutus: Enghoff, 1984, Senckenb. biol., 64: 399, figs. 1, 2.

Range: Eastern United States, from Pennsylvania and Missouri south to Florida and Louisiana.

Superfamily Paeromopodoidea Cook

Paeromopodoidea Mauries, 1970, Ann. Spéléol., 25: 117.

Family Aprosphylosomatidae Hoffman

Aprosphylosomatinae Hoffman, 1961, Proc. Entom. Soc. Washington, 63: 58 (as subfamily in the Nemasomatidae).

Aprosphylosomatidae Shelley, 1994, Entom. Scandinavica, 25: 181.

Genus **Aprosphylosoma** Hoffman

Aprosphylosoma Hoffman, 1961, Proc. Entom. Soc. Washington, 63: 59. Type species: *A. darceneae* Hoffman, by original designation. – Enghoff, 1981, Zeitschr. Zool. Syst. Evol. Forsch., 19: 314.

One species: Oregon.

Aprosphylosoma darceneae Hoffman

Aprosphylosoma darceneae Hoffman, 1961, Proc. Entom. Soc. Washington, 63:60, figs. 1-9. ♂ HT (USNM) from Oregon Caves National Monument, Josephine Co., Oregon.

Family Paeromopodidae Cook

Paeromopidae Cook, 1895, Ann. New York Acad. Sci., 9: 6.

Paeromopodidae Cook, 1896, Brandtia, 2: 6. – Jeekel, 1971, Monogr. Nederlandse Entom. Ver., 5: 171. – Shelley, 1994, Entom. Scandinavica, 25: 181 (revision).

Californiulidae Verhoeff, 1938, Zool. Anz., 122: 114. Synonymized by Chamberlin, 1949.

Two genera, western United States (Montana and Washington, south to California).

Genus **Californiulus** Verhoeff

Californiulus Verhoeff, 1938 (May), Zool. Anz., 122: 114. Type species: *C. dorsovittatus* Verhoeff, by monotypy. – Chamberlin, 1949, Chicago Acad. Sci. Nat. Hist. Misc., 52: 4. – Shelley, 1994, Entom. Scandinavica, 25: 193 (revision).

Klansolus Chamberlin, 1938 (December), Proc. Biol. Soc. Washington, 51: 205. Type species: *K. euphanus* Chamberlin, by original designation. Synonymized by Hoffman, 1980.

Aigon Chamberlin, 1949, Chicago Acad. Sci. Nat. Hist. Misc., 52: 2. Type species: *A. rodocki* Chamberlin, 1949, by original designation. Synonymized by Hoffman, 1980.

Atopolus Chamberlin, 1949, Chicago Acad. Sci. Nat. Hist. Misc., 52: 3. Type species, *Paeromopus chamberlini* Brolemann, by original designation. Synonymized by Hoffman, 1980.

Six species, western United States.

Californiulus blechrostriatus Shelley & Bauer

Californiulus blechrostriatus Shelley & Bauer, 1997, Ent. News, 108: 10, figs. 12-15. ♂ HT (CAS) from an unspecified site in Saline Valley, Death Valley National Park, Inyo Co., California.

Californiulus chamberlini (Brolemann)

Paeromopus chamberlini Brolemann, 1922, Ann. Entom. Soc. America, 15: 289, figs. 6-9, 53-57. Location of type material unknown, perhaps lost, from Mount Shasta, Siskiyou Co., California.

Atopolus chamberlini: Chamberlin, 1949, Chicago Acad. Sci. Nat. Hist. Misc., 52: 3.

Klansolus zantus Chamberlin, 1949, Chicago Acad. Sci. Nat. Hist. Misc., 52: 5. ♂ HT (USNM) from 12 miles east of Cave Junction, Josephine Co., Oregon. Synonymized by Shelley, 1994.

Californiulus chamberlini: Shelley, 1994, Entom. Scandinavica, 25: 195, figs. 9-11, 36-38.

Range: Three localities known, in Josephine Co., Oregon, and Shasta and Siskiyou cos., California (map, Shelley, 1994, fig. 51).

Californiulus dorsovittatus Verhoeff

Californiulus dorsovittatus Verhoeff, 1938, Zool. Anz., 122: 118, figs. 1-7; 1944, Bull. So. California Acad. Sci., 43: 62, figs. 4-13. ♂ and ♀ ST (ZSBS), from Mount Harkness, one mile south of Juniper Lake, Plumas Co., California. – Shelley, 1994, Entom. Scandinavica, 25: 197, figs. 12-14, 39-41.

Range: Northern California (Siskiyou, Shasta, Lassen, Tehama, and Plumas cos.) (map, Shelley & Bauer, 1997, fig. 16).

Chamberlin's error (1949) in placing Mount Harkness at Berkeley, California, was discerned and corrected by Shelley (1994: 197). Verhoeff had mentioned Berkeley only as the residence of A. E. Michelbacher, collector of the type material.

Californiulus euphanus (Chamberlin)

Klansolus euphanus Chamberlin, 1938, Proc. Biol. Soc. Washington, 51: 205. ♀ HT (USNM) from Boyer, Tillamook Co., Oregon.

Californiulus euphanus: Shelley, 1994, Entom. Scandinavica, 25: 200, figs. 45-47.

Range: Western Washington (except Olympic Peninsula), northwest Oregon; also a small disjunct population in extreme southeastern Washington (maps, Shelley, 1994, Figs. 52, 54.

Californiulus parvior (Chamberlin)

Klansolus parvior Chamberlin, 1940, Pomona Coll. Journ. Entom. Zool., 32: 83. ♀ HT (USNM) from Flathead Lake, Flathead and Lake cos., Montana.

Aigon parvior Chamberlin, 1949, Chicago Acad. Sci. Nat. Hist. Misc., 52: 3.

Klansolus socius Chamberlin, 1941, Bull. Univ. Utah, 31(11): 16, figs. 19-23. ♂ HT (not at USNM, lost?) from eight miles west of Wallowa, Wallowa Co., Oregon. Synonymized by Shelley, 1994.

Aigon rodocki Chamberlin, 1949, Chicago Acad. Sci. Nat. Hist. Misc., 52: 2, figs. 1, 2. ♂ HT (USNM) from Sweetwater, Nez Perce Co., Idaho. Synonymized by Shelley, 1994.

Californiulus parvior: Shelley, 1994, Entom. Scandinavica, 25: 201, figs. 3-5, 48-50.

Range: Western Montana, northern Idaho, northeastern Oregon (map, Shelley, 1994, fig. 51).

Californiulus yosemitensis Chamberlin

Californiulus yosemitensis Chamberlin, 1941, Bull. Univ. Utah, 31(11): 17, figs. 24-26. ♂ HT (USNM) from Aspen Valley in Yosemite National Park, Tuolumne Co., California. – Shelley, 1994, Entom. Scandinavica, 25: 199, figs. 15-17, 42-44.

Klansolus mononus Chamberlin, 1954, Proc. Biol. Soc. Washington, 67: 231. ♂ HT (AMNH) from "Leevinning" [= Lee Vining], Mono Co., California. Synonymized by Shelley, 1994.

Klansolus obscurans Chamberlin, 1954, Proc. Biol. Soc. Washington, 67: 231. ♂ HT (USNM) from Big Bar Mountain, southwest of Coyote Gap, Butte Co., California. Synonymized by Shelley, 1994.

Range: Sierra Nevada mountains from extreme southern Oregon south to Kern Co., California (map, Shelley & Bauer, 1997, fig. 16).

Genus **Paeromopus** Karsch

Paeromopus Karsch, 1881, Zeitschr. Ges. Naturwiss. 54: 12. Type species: *P. lysiopetalinus* Karsch, by original designation. – Chamberlin, 1949, Chicago Acad. Sci. Nat. Hist. Misc., 52: 5. – Loomis, 1972, Florida Entom., 55: 260. – Shelley, 1994, Entom. Scandinavica, 25: 182 (revision). – Shelley & Bauer, 1997, Ent. News, 108: 2.

Paeromopellus Verhoeff, 1938, Zool. Anz., 122: 124. Type species: *P. sphinx* Verhoeff (= *Paeromopus lysiopetalinus* Karsch), by monotypy. Synonymized by Chamberlin, 1949.

Five species, California.

Paeromopus angusticeps angusticeps (Wood)

Spirobolus angusticeps Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 16. Original ♀ type lost, ♂ NT (USNM) from Oakland, Alameda Co., California, designated by Shelley 1994.

Paeromopus lysiopetalinus Karsch, 1881, Zeitschr. Ges. Naturwiss., 54: 12. ♂ HT (ZMB) from California, without further data. – Chamberlin, 1910, Ann. Entom. Soc. America, 3: 257, pl. 42, figs. 3-5, pl. 43, figs. 1-3. Synonymized by Shelley, 1994.

Paeromopellus sphinx Verhoeff, 1938, Zool. Anz., 122: 125, figs. 8-9. Junior objective synonym based on the holotype of *P. lysiopetalinus*.

Paeromopus pistus Chamberlin, 1941, Bull. Univ. Utah, 31(12): 7, figs. 8. 9. ♂ HT (USNM) from Stanford, Palo Alto Co., California. Synonymized by Shelley, 1994.

Paeromopus angusticeps: Chamberlin, 1949, Chicago Acad. Sci. Nat. Hist. Misc., 52: 6. – Shelley, 1994, Entom. Scandinavica, 25: 184, figs. 2, 18-26.

Paeromopus angusticeps angusticeps: Shelley & Bauer, 1997, Ent. News, 108: 2, figs. 1, 2.

Range: The San Francisco and Monterey Bay areas of coastal California (map, Shelley, 1994, fig. 35).

Paeromopus angusticeps buttensis Chamberlin

Paeromopus buttensis Chamberlin, 1954, Proc. Biol. Soc. Washington, 67: 232. ♂ HT (USNM) from Big Bar Mountain east of Pulga, Butte Co., California. – Shelley, 1994, Entom. Scandinavica, 25: 190, figs. 6-8, 33, 34.

Paeromopus ocellatus Loomis, 1972, Florida Entom., 55: 260, figs. 1-5. ♂ HT (USNM) from a site between Vallejo and Cordelia, Solano Co., California. – Shelley, 1994, Entom. Scandinavica, 25: 187, figs. 27-28. Synonymized by Shelley & Bauer, 1997.

Paeromopus angusticeps buttensis: Shelley & Bauer, 1997, Ent. News, 108: 3, figs. 7, 8.

Range: California, from Trinity County south and east through the Coast and Sierra Nevada ranges to Sonoma and Tuolumne cos.(map, Shelley & Bauer, 1997, fig. 11).

Paeromopus cavicolens Chamberlin

Paeromopus cavicolens Chamberlin, 1949, Chicago Acad. Sci. Nat. Hist. Misc., 52: 6, figs. 3, 4. ♂ HT (USNM) from Windeler Cavern, about eight miles north of Columbia, Tuolumne Co., California. – Shelley, 1994, Entom. Scandinavica, 25: 189, figs. 31, 32.

Paeromopus eldoradus Chamberlin

Paeromopus eldoradus Chamberlin, 1941, Bull. Univ. Utah, 31(12): 7, figs. 10, 11. ♂ HT (USNM) from Coloma, El Dorado Co., California. – Shelley, 1994, Entom. Scandinavica, 25: 188, figs. 29, 30.

Paeromopus paniculus Shelley & Bauer

Paeromopus paniculus Shelley & Bauer, 1997, Ent. News, 108: 6, figs. 9-10. ♂ HT (UCD) from 14.1 miles east of Briceburg, Marisposa Co., California.

Range: Sierra Nevada mountains, three localities in Mariposa Co., California.

Family Parajulidae Bollman

Parajulinae Bollman, 1893, Bull. U. S. Nat. Mus. 46: 156.

Paraiulidae [sic!] Cook, 1895, Ann. New York Acad. Sci., 9: 6. – Pocock, 1903, Diplopoda, in Biol. Centr.-Amer., p. 53. – Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 129. – Causey, 1974, Symp. Zool. Soc. London, 32: 23 (classification).

Uroblaniulinae Attems, 1909, Ark. Zool., 5 (3): 45.

Ptyoiulinae Causey, 1974, Symp. Zool. Soc. London, 32: 32.

28 genera, eastern Asia, most of North America, and southward as far as Guatemala.

Dr. Causey's revision of this family, in preparation over several decades, was never completed for publication, and this large, diverse, and very interesting group will have to be restudied *de novo*. So far, only a few short contributions to knowledge of parajulids have appeared since 1974, and the present listing largely follows the sequence of my 1980 account (itself qualified as highly provisional) at the generic level. Species listings for North America are essentially those of the 1958 "Checklist" except in some cases in which generic assignments (chiefly by Dr. Chamberlin) can scarcely be justified from the inadequate original accounts of gonopod structure. My limited experience with this family suggests that a number of the generic names proposed by both Chamberlin and Causey will eventually be found to be superfluous.

Classification of the Central American parajulids is especially unsatisfactory. The discovery by Mauries (1972) that the gonopods in the type genus lack a prostatic groove, otherwise typical for the family, excludes *Parajulus* from the Paraiulini as defined by Causey in 1974. Perhaps some of the Mexican species can be referred to *Pheniulus,* some to *Mexicoiulus*, others to new genera. Lacking the opportunity and time to investigate this problem, I have had to list most of the described species in the category of "Species of Uncertain Generic Position."

Genus **Aliulus** Causey

Aliulus Causey, 1950, Proc. Arkansas Acad. Sci., 3: 45. Type species: *A. carrollus* Causey, by original designation.

Three species: Arkansas and Oklahoma; Illinois to Pennsylvania.

Aliulus caddoensis Causey

Aliulus caddoensis Causey, 1950, Proc. Arkansas Acad. Sci., 3: 46, figs. 5, 6. ♂ HT (ANSP) from an unspecified locality in Caddo Co., Oklahoma.

Range: Southeastern Oklahoma and northwestern Arkansas: Dallas, Sebastian, Polk, Howard, and Pike cos.

Aliulus carrollus Causey

Aliulus carrollus Causey, 1950, Proc. Arkansas Acad. Sci., 3: 45, figs. 1-4. ♂ HT (ANSP) from Blue Spring, Carroll Co., Arkansas.

Range: Northwest Arkansas: Benton, Carroll, Searcy, and Washington cos.

Aliulus rugosus (Bollman)

Parajulus rugosus Bollman, 1887, Entom. Americana, 3: 81. ♂ HT (?USNM) from Monongahela City, Washington Co., Pennsylvania.

Aliulus rugosus Causey, 1952, Proc. Arkansas Acad. Sci., 5: 22, fig. 5.

Range: Central United States: Illinois to Pennsylvania.

Genus **Aniulus** Chamberlin

Aniulus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 3. Type species: *A. adelphus* Chamberlin, by original designation. – Loomis, 1976, Florida Entom., 59: 289 (key to the nine species known from Texas).

20 species, United States from New York to Georgia, and west to Utah and Arizona.

Aniulus acuminatus Loomis

Aniulus acuminatus Loomis, 1976, Florida Entom., 59: 290, figs. 4-6. ♂ HT (FSCA) from five miles ESE of Marble Falls, Burnet Co., Texas.

Aniulus adelphus Chamberlin

Aniulus adelphus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 3, figs. 1-3. ♂ HT (USNM) from a site southwest of Boerne, Kendall Co., Texas.

Aniulus annectans (Chamberlin), new combination.

Parajulus annectans Chamberlin, 1921, Canadian Entom., 53: 233, figs. 1.1, 1.2. ♂ HT (MCZ) from Knox County, Tennessee.

Oriulus annectans Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 139.

I have not seen type material, and this generic placement is based upon Chamberlin's original association of the species with his *P. nigrans*, which was referred to *Aniulus* by Causey, 1964.

Aniulus austinensis Chamberlin

Aniulus austinensis Chamberlin, 1940, Bull. Univ. Utah, 30(11): 4, figs. 4, 5. ♂ HT (USNM) from Austin, Travis Co., Texas.

Aniulus bollmani Causey

Parajulus (or *Paraiulus*) *impressus*: authors prior to 1952 (misidentification of *Julus impressus* Say, 1821).

Aniulus bollmani Causey, 1952, Proc. Arkansas Acad. Sci., 5: 19, figs. 7, 8. ♂ HT (AMNH) from Winslow, Stephenson Co., Illinois.

Range: Western Pennsylvania to Wisconsin and North Dakota.

Aniulus brazonus Chamberlin

Aniulus brazonus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 4, figs. 6, 7. ♂ HT (USNM) from an unspecified site in Brazos Co., Texas.

Aniulus craterus Chamberlin

Aniulus craterus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 5, figs. 9, 10. ♂ HT (USNM) from "Raven Ranch", ca. 12 miles south of Kerrville, Kerr Co., Texas.

Aniulus dorophor Chamberlin

Aniulus dorophor Chamberlin, 1940, Bull. Univ. Utah, 30(11): 5, figs. 11-13. ♂ HT (USNM) from a site south of Three Rivers, Live Oak Co., Texas.

Aniulus fili Loomis

Aniulus fili Loomis, 1975, Florida Entom., 58: 219, figs. 6-8. ♂ HT (FSCA) from a site two miles southwest of Comfort, Kendall Co., Texas.

Aniulus fluviatilis Chamberlin

Aniulus fluviatilis Chamberlin, 1940, Bull. Univ. Utah, 30(11): 6, figs. 14, 15. ♂ HT (USNM) from an unspecified locality in Brazos Co., Texas.

Aniulus garius (Chamberlin), new combination

Parajulus garius Chamberlin, 1912, Ann. Entom. Soc. America, 5: 167, pl. 12, figs. 6-8. Type material lost, from Tolland, Gilpin Co., Colorado.

Topotypic females (VMNH), presumably of this species, agree so closely in cyphopod structure with material identified by N. B. Causey as *A. bollmani* as to suggest conspecificity, the only evident difference being the distinctly larger 2nd legs (shown clearly in Chamberlin's fig. 8). However, until male topotypes of *garius* are available it is preferable to retain specific status for both names.

Aniulus hopius Chamberlin

Aniulus hopius Chamberlin, 1941, Bull. Univ. Utah, 31(11): 19, figs. 30, 31. ♂ HT (USNM) from Greaterville, Pima Co., Arizona.

Aniulus nigrans (Chamberlin)

Parajulus nigrans Chamberlin, 1918, Psyche, 25: 27. ♂ HT (MCZ) from near Nashville, Davidson Co., Tennessee.

Aniulus nigrans Causey, 1959, Journ. Tennessee Acad. Sci., 34: 231.

Range: Central Tennessee (Davidson and Smith cos.)

Aniulus oreines Chamberlin

Aniulus oreines Chamberlin, 1940, Bull. Univ. Utah, 30(11): 6, figs. 19, 20. ♂ HT (USNM) from two miles west of Glenwood, Garfield Co., Colorado.

Range: Recorded also from Salt Lake Co., Utah; unpublished record for the Santa Catalina Mountains northeast of Tucson, Arizona (VMNH).

This species was transferred to *Ethojulus* by Loomis (1959), an action I believe to be incorrect. I do not know how it differs from *A. paiutus*.

Aniulus orientalis Causey

Aniulus orientalis Causey, 1952, Proc. Arkansas Acad. Sci., 5: 20, figs. 1-4. ♂ HT (AMNH), of uncertain provenance, ". . .probably near Durham, North Carolina" which seems correct in light of recent collections..

Range: Central North Carolina, north and west through the Appalachians as far as southern West Virginia.

Aniulus orthodoxus Chamberlin

Aniulus orthodoxus Chamberlin, 1946, Proc. Biol. Soc. Washington, 59: 32, figs. 3, 4. ♂ HT (USNM) from Reelfoot Lake, Obion Co., Tennessee.

Aniulus paiutus (Chamberlin)

Parajulus paiutus Chamberlin, 1925, Pan-Pacific Entom., 2: 60. ♂ HT (USNM) from Parowan, Iron Co. Utah.

Aniulus paiutus: Causey, 1967, Michigan Entom., 1: 127.

Range: Disjunct populations in Arizona, New Mexico, Colorado, and Utah.

Perhaps a senior synonym of *A. oreines*.

Aniulus paludicolens Causey

Aniulus paludicolens Causey, 1967, Michigan Entom., 1: 127, figs. 1-6. ♂ HT (USNM) from Dollar Tamarack Swamp, E. S. George Reserve, Livingston Co., Michigan.

Range: Boggy areas, northern Illinois to southern Ontario.

Aniulus prosoicus Chamberlin

Aniulus prosoicus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 7, figs. 16-18. ♂ HT (USNM) from Edinburg, Hidalgo Co., Texas.

The form of the posterior gonopod in this species strongly suggests that typical of the genus *Ethojulus*.

Aniulus vestigialis Loomis

Aniulus vestigialis Loomis, 1959, Journ. Washington Acad. Sci., 49: 163, figs. 15-18. ♂ HT (USNM) from Landa Park, New Braunfels, Comal Co., Texas.

Genus **Apacheiulus** Loomis

Apacheiulus Loomis, 1968, Florida Entom., 51: 159. Type species: *A. pinalensis* Loomis, by original designation.

Two species: Arizona, Texas..

Apacheiulus guadelupensis Loomis

Apacheiulus guadelupensis Loomis, 1975, Florida Entom., 58: 217, figs. 1-4. ♂ HT (FSCA) from Bush Mountain in the Guadelupe Mountains, Hudspeth Co., Texas.

Apacheiulus pinalensis Loomis

Apacheiulus pinalensis Loomis, 1968, Florida Entom., 51: 160, figs. 1-5. ♂ HT (USNM) from the Pinal Mountains, between Miami and Superior, probably in Pinal Co., Arizona.

Genus **Arvechambus** Causey

Arvechambus Causey, 1963, Proc. Louisiana Acad. Sci., 26: 66. Type species: *A. hummi* Causey, by original designation.

Three species, northern Florida and southeastern Georgia.

Arvechambus australis Causey

Arvechambus australis Causey, 1963, Proc. Louisiana Acad. Sci., 26: 71, figs. 4-6. ♂ HT (USNM) from Gainesville, Alachua Co., Florida.

Arvechambus hummi Causey

Arvechambus hummi Causey, 1963, Proc. Louisiana Acad. Sci., 26: 69, figs. 1-3, 9. ♂ HT (USNM) from Tallahassee, Leon Co., Florida.

Range: Northwest Florida, between Baker County and the Apalachicola River.

Arvechambus weemsi Causey

Arvechambus weemsi Causey, 1963, Proc. Louisiana Acad. Sci., 26: 71, figs. 7, 8. ♂ HT (USNM) from Waycross, Ware Co., Georgia.

Genus **Bollmaniulus** Verhoeff

Bollmaniulus Verhoeff, 1926, Zool. Anz., 68: 65. Type species: *Iulus furcifer* Harger, 1872, by monotypy.

Taijulus Chamberlin, 1938, Proc. Biol. Soc. Washington, 51: 205. Type species: *Paraiulus tiganus* Chamberlin, 1910, by original designation. Synonymized by Hoffman, 1980.

Taiulus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 18, and in other papers by this author and N. B. Causey.

Caliulus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 15. Type species: *C. pachysomus* Chamberlin, by original designation. Synonymized by Chamberlin & Hoffman, 1958.

13 species, western United States, British Columbia.

In designating the type species of *Bollmaniulus,* Verhoeff (1926: 65) stated "für *furcifer* (Harger) Bröl." as his concept of *furcifer* was based on Brolemann's account of a species so identified in his 1902 paper. The gonopods of a male syntype of *furcifer* have been illustrated by Shelley (1993, figs. 1-3) and fortunately appear to be conspecific with those drawn by Brolemann.

The presence of a small acicular projection on the posterior gonopod, at the juncture of the two distal branches, scarcely seems adequate to justify a genus *Taijulus*. The apically expanded and lobed primary branch seen in such species as *olympus* and *hewetti* seems a more plausible basis for generic status, which if recognized would require proposal of a new name.

Bollmaniulus catalinae (Chamberlin)

Caliulus catalinae Chamberlin, 1940, Bull.Univ. Utah, 30(11): 17, figs. 57, 58. ♂ HT (USNM) from "Catalina Island" [presumably Santa Catalina], Los Angeles Co., California.

Bollmaniulus catalinae: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 132.

Bollmaniulus concolor (Chamberlin)

Caliulus concolor Chamberlin, 1940, Bull. Univ. Utah, 30(11): 18, figs. 56a, 59. ♂ HT (USNM) from Redlands, San Bernardino Co., California.

Bollmaniulus furcifer (Harger)

Iulus furcifer Harger, 1872, American Journ. Sci. Arts, 4: 119, fig. 7. ♂ & ♀ STs (YPM) from the vicinity of Canyon City, Grant Co., Oregon.

Parajulus furcifer Bollman, 1887, Ann. New York Acad. Sci., 4: 44.

Paraiulus furcifer Brolemann, 1895, Ann. Soc. Entom. France, 65: 69, figs. 21-23.

Bollmaniulus furcifer Verhoeff, 1926, Zool. Anz., 122: 65. – Shelley, 1993, Brimleyana, 18: 7, figs. 1-3 (gonopods of type material; identification of type locality).

Taijulus furcifer Chamberlin, 1938, Proc. Biol. Soc. Washington, 51: 205.

Caliulus furcifer Chamberlin, 1940, Bull. Univ. Utah, 30(11): 15.

Range: Aside from the type locality, uncertain pending revision of the genus but probably widespread in northwestern United States.

Bollmaniulus hewitti (Chamberlin), new combination!

Parajulus hewitti Chamberlin, 1919, Canadian Entom., 51: 119, fig. 21. ♂ HT (MCZ) from Agassiz, British Columbia.

Codiulus hewitti Chamberlin, 1940, Bull. Univ. Utah, 30(11): 20, figs. 67-69.

Tuniulus hewitti Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 146.

Range: Aside the type locality, recorded from Mount Ranier National Park, Washington.

Bollmaniulus montanae (Chamberlin), new combination

Caliulus montanae Chamberlin, 1940, Bull. Univ. Utah, 30(11): 16, fig. 63. ♂ HT (USNM) from Nimrod, Flathead Co., Montana.

This species was inexplicably omitted from the 1958 "Checklist".

Bollmaniulus olympus (Causey), new combination

Taiulus olympus Causey, 1953, American Midl. Nat., 50: 154, figs. 8-10. ♂ HT (AMNH) from Olympic Hot Springs [county not located, presumably on the Olympic Peninsula], Washington.

Bollmaniulus pachysomus (Chamberlin)

Caliulus pachysomus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 15, fig. 56. ♂ HT (USNM) from "Yosemite National Park", probably that part lying within Mariposa Co., California.

Bollmaniulus pachysomus Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 133.

Bollmaniulus pearcei (Chamberlin)

Caliulus pearcei Chamberlin, 1943, Bull. Univ. Utah, 34(6): 12, fig. 39. ♂ HT (USNM) from South Fork of Bishop Creek, Inyo Co., California.

Bollmaniulus pugetensis Chamberlin

Caliulus pugetensis Chamberlin, 1940, Bull. Univ. Utah, 30(11): 16, figs. 61, 62. ♂ HT (USNM) from Puget Sound, Washington, without closer locality.

Bollmaniulus rhodogeus Chamberlin

Caliulus rhodogeus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 17, fig. 60. ♂ HT (USNM) from Redlands, San Bernardino Co., California.

Bollmaniulus signifer (Chamberlin)

Caliulus signifer Chamberlin, 1940, Bull. Univ. Utah, 30(11): 19, fig. 32. ♂ HT (USNM) from Pinehurst, Jackson Co., Oregon.

Bollmaniulus signifer: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 134.

Bollmaniulus spenceri (Chamberlin)

Caliulus spenceri Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc., 87: 10, figs. 22, 23. ♂ HT (USNM) from Kamloops (50.40N, 120.20W), British Columbia.

Bollmaniulus tiganus (Chamberlin)

Paraiulus tiganus Chamberlin, 1910, Ann. Entom. Soc. America, 3: 254, pl. 40, figs. 6-8, pl. 41, figs. 1-4. Type material not known to exist, from "Canyons of the Wahsatch Mountains", Salt Lake Co., Utah.

Taijulus tiganus Chamberlin, 1938, Proc. Biol. Soc. Washington, 51: 205.

Bollmaniulus tiganus Hoffman, 1980, Classification of the Diplopoda, p. 108 (de facto new combination by merger of *Taijulus* into *Bollmaniulus).*

Range: Extent uncertain, but including northern Utah and adjacent parts of Idaho and Wyoming.

Genus **Codiulus** Chamberlin

Codiulus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 19. Type species: *C. oulogon* Chamberlin, by original designation.

Two nominal species, southern California.

In its original presentation, this genus contained four species, referable to three distinct genera. In the following year, Dr. Chamberlin extracted *C. milpetanus* and *C. oregonensis* into the new genus *Tuniulus,* but wrongly retained the quite different *C. hewitti,* along with the other two mentioned.

The long, proximally reflexed telopodites of the posterior gonopods probably justify generic rank. But it is difficult to believe, from published information, that *C. etirus* is specifically different from *oulogon*.

Codiulus etirus Chamberlin

Codiulus etirus Chamberlin, 1941, Bull. Univ. Utah, 31(11): 18, fig. 29. ♂ HT (USNM) from "Cardiff" [presumably Cardiff-by-the-Sea], San Diego Co., California.

Codiulus oulogon Chamberlin

Codiulus oulogon Chamberlin, 1940, Bull. Univ. Utah, 30(11): 19, fig. 66. ♂ HT (USNM) from "Box Springs Grade", Riverside Co., California.

The settlement "Box Springs" was just southeast of Riverside, and has now probably been absorbed into the suburbs of that city.

Genus **Ethojulus** Chamberlin

Ethojulus Chamberlin, 1918, Canadian Entom., 50: 361. Type species: *E. amphelictus* Chamberlin, by original designation.

Illiulus Causey, 1950, Proc. Arkansas Acad. Sci., 3: 47. Type species: *I. illinoensis* Causey, by original designation. Synonymized by Chamberlin & Hoffman, 1958.

Four (?) species, lower Mississippii Valley, eastern Texas.

Removed from genus: *Ethojulus bufonius* Chamberlin, 1938 (see *Gyniulus).*

Ethojulus amphelictus Chamberlin

Ethojulus amphelictus Chamberlin, 1918, Canadian Entom., 50: 361. ♂ HT (?MCZ) from Covington, St. Tammany Parish, Louisiana.

Ethoiulus amphelictus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 10, figs. 30, 31.

Range: type locality and Greene Co., Mississippii.

Ethojulus illinoensis (Causey)

Illiulus illinoensis Causey, 1950, Proc. Arkansas Acad. Sci., 3: 47, figs. 13-17. ♂ HT (ANSP) from McCann's Spring at LaRue, Union Co., Illinois.

Range: Southern Illinois, northwestern Arkansas.

Ethojulus ligifer (Chamberlin)

Parajulus ligifer Chamberlin,1919, Proc. Biol. Soc. Washington, 32: 119. ♂ HT (MCZ) from Victoria, Victoria Co., Texas.

Ethoiulus geniculatus Causey, 1952, Texas Journ. Sci., 4: 201, figs. 8-10. ♂ HT (AMNH) from Fort Bend Co., Texas. Synonymized by Chamberlin & Hoffman, 1958.

Range: Several counties in southcentral Texas.

Ethojulus robustior (Chamberlin)

Parajulus robustior Chamberlin, 1918, Ann. Entom. Soc. America, 11: 373. ♂ HT (MCZ) from Creston, Natchitoches Parish, Louisiana.

Ethoiulus robustior Causey, 1953, American Midl. Nat., 50: 152.

Ethoiulus unilictus Causey, 1953, American Midl. Nat., 50: 152, figs. 1-4. ♂ HT (AMNH) from Ruston, Lincoln Parish, Louisiana. Synonymized by Chamberlin & Hoffman, 1958.

Range: Northwestern Louisiana.

Genus **Georgiulus** Hoffman

Georgiulus Hoffman, 1992, Jeffersoniana, 1: 9. Type species: *G. paynei* Hoffman, by original designation.

Two species, southeastern United States (map, Hoffman, 1992, fig. 22).

Georgiulus hubrichti Hoffman

Georgiulus hubrichti Hoffman, 1992, Jeffersoniana, 1: 14, figs. 12-14. ♂ HT (VMNH) from roadside four miles north of Evans, Columbia Co., Georgia.

Georgiulus paynei Hoffman

Georgiulus paynei Hoffman, 1992, Jeffersoniana, 1: 9, figs. 1-11. ♂ HT (VMNH) from Tifton, Tift Co., Georgia.

Range: Southwestern Georgia (Tift, Thomas, Houston cos.).

Genus **Gosiulus** Chamberlin

Gosiulus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 10. Type species: *G. conformatus* Chamberlin, by original designation.

Ziniulus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 13. Type species: *Z. aethes* Chamberlin, by original designation. Synonymized by Hoffman, 1980.

Five species, Texas.

Gosiulus aethes (Chamberlin)

Ziniulus aethes Chamberlin, 1940, Bull. Univ. Utah, 30(11): 13, figs. 48-50. ♂ HT (USNM) from Austin, Travis Co., Texas.

Range: Reported from Burnet Co., Texas by Loomis (1976).

Gosiulus ambiguus (Loomis), new combination

Ziniulus ambiguus Loomis, 1959, Journ. Washington Acad. Sci., 49: 163, figs. 20-23. ♂ HT (USNM) from Beauregard Road, ca. five miles south-southwest of Boerne, Kendall Co., Texas.

Gosiulus conformatus Chamberlin

Gosiulus conformatus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 10, figs. 32-35. ♂ HT (USNM) from south of Three Rivers, Live Oak Co., Texas. – Loomis, 1968, Florida Entom., 51: 160, figs. 6, 7.

Range: Recorded from Live Oak, McCulloch, Bexar, and Jim Wells counties, Texas.

Gosiulus medicolens (Chamberlin)

Ziniulus medicolens Chamberlin, 1940, Bull. Univ. Utah, 30(11): 13, figs. 51, 52. ♂ HT (USNM) from Raven Ranch, Kerr Co., Texas.

Gosiulus nati (Loomis), new combination

Ziniulus nati Loomis, 1963, Journ. Kansas Entom. Soc., 36: 122, figs. 20-23. ♂ HT (USNM) from 1.7 miles north of Artesia Wells, LaSalle Co., Texas.

Loomis (unpubl. MS notes) considered this species to be a junior synonym of *G. conformatus.* I defer formalizing such a change pending revisionary studies which may support at least subspecific status for *nati*, although I agree with Loomis's recognition of close similarity in the gonopods of the two forms.

Genus **Gyniulus** Loomis

Gyniulus Loomis, 1963, Florida Entom., 46: 193.Type species: *G. myakkensis* Loomis, by original designation.

Four species, peninsular Florida.

Gyniulus bufonius (Chamberlin), new combination

Ethojulus bufonius Chamberlin, 1938, Proc. Biol. Soc. Washington, 51: 206. ♂ HT (USNM) from Gainesville, Alachua Co., Florida.

Gyniulus domesticus Loomis

Gyniulus domesticus Loomis, 1968, Florida Entom., 51: 162, figs. 8-11. ♂ HT (USNM) from residence at 5355 SW 92nd St., Miami, Dade Co., Florida.

Gyniulus lacustrinus Loomis

Gyniulus lacustrinus Loomis, 1968, Florida Entom., 51: 162, figs. 12-15. ♂ HT (USNM) from site near Belle Glade, Palm Beach Co., Florida.

Gyniulus myakkensis Loomis

Gyniulus myakkensis Loomis, 1963, Florida Entom., 46: 193, figs. 1-5. ♂ HT (USNM) from Myakka River State Park, Sarasota Co., Florida.

Genus **Hakiulus** Chamberlin

Hakiulus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 10. Type species: *H. amophor* Chamberlin, by original designation.

Ten poorly-defined "species" were listed by Chamberlin & Hoffman, 1958, from a generic range encompassing much of central United States from Pennsylvania to New Mexico.

Removed from genus: *Parajulus neomexicanus* Chamberlin, 1903 (see Parajulidae of Uncertain Generic Positition or Validity)

Hakiulus amophor Chamberlin

Hakiulus amophor Chamberlin, 1940, Bull. Univ. Utah, 30(11): 10, figs. 36-39. ♂ HT (USNM) from Turtle Creek, Kerr Co., Texas.

Hakiulus cyaneus (Chamberlin)

Ethoiulus cyaneus Chamberlin, 1920, Proc. Biol. Soc. Washington, 33: 41. ♂ HT (MCZ) from Bay City, Matagorda Co., Texas.

Hakiulus cyaneus: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 136.

Hakiulus diversifrons (Wood)

Iulus sp. innom. Wood, 1865, Trans. American Philos. Soc., 13: 197, fig. 30.

Iulus diversifrons Wood, 1867, Proc. Acad. Nat. Sci. Philadelphia, 19: 43. Type material not known to exist, with only the indication "South Illinois, rare in Western States, but very plenty in Texas." Causey (1953: 153) considered the description to have been based on a single male from Illinois. Apparently she did not designate a neotype to stabilize the identity of the name, nor was this done by Chamberlin & Hoffman (1958: 136) when specifying "Southern Illinois" to be the type locality.

Parajulus castaneus Bollman, 1887, Entom. Americana, 2: 226. ♂ HT (USNM) from Fort Snelling [not located; now included in Minneapolis?], Minnesota. Synonymized by Bollman, 1893.

Parajulus diversifrons: Williams & Hefner, 1928, Bull. Ohio Biol. Surv., 18: 128, fig. 20.

Hakiulus diversifrons: Chamberlin, 1940, Bull. Univ. Utah, 30(11): 10.

Hakiulus parallelus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 12, figs. 41-43. ♂ HT (USNM) from Cleveland Co., Oklahoma. Synonymized by Causey, 1953.

Range: Recorded from Ohio west to Minnesota and Colorado, south to Texas; some of the southern localities might be based on other members of the genus.

Hakiulus minori Causey

Hakiulus minori Causey, 1952, Texas Journ. Sci., 4: 200, figs. 1-3. ♂ HT (AMNH) from Lufkin, Angelina Co., Texas.

Range: Angelina and Polk counties, eastern Texas.

Hakiulus occidentalis Loomis

Hakiulus occidentalis Loomis, 1975, Florida Entom., 58: 219, figs. 9-11. ♂ HT (FSCA) from the Guadeloupe Mountains in Hudspeth Co., Texas.

I do not see how this entity is to be distinguished from *H. zakiwanus* Chamberlin, at least in terms of gonopod structure.

Hakiulus orthodox Chamberlin

Hakiulus orthodox Chamberlin, 1940, Bull. Univ. Utah, 30(11): 11, figs. 40. ♂ HT (USNM) from College Station, Brazos Co., Texas.

Hakiulus texanus (Chamberlin)

Parajulus texanus Chamberlin, 1916, Psyche, 23: 35. ♂ HT (MCZ) from Victoria, Victoria Co., Texas.

Hakiulus texanus: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 137.

This species is retained in *Hakiulus* solely in deference to Dr. Chamberlin's interpretation of the original description in 1955. I personally cannot see *Hakiulus* in the vague printed account of gonopod characters. Clearly, the type material must be restudied.

Hakiulus texensis Causey

Hakiulus texensis Causey, 1952, Texas Journ. Sci., 4: 201, figs. 6, 7. ♂ HT (AMNH) from Kilgore, Gregg Co., Texas.

This taxon can scarcely be anything other than a subspecies of *diversifrons*.

Hakiulus victorianus (Chamberlin)

Parajulus victorianus Chamberlin, 1916, Psyche, 23: 33. ♂ HT (MCZ) from Victoria, Victoria Co., Texas.

Hakiulus victorianus: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 137.

The generic assignation of this species requires confirmation.

Hakiulus zakiwanus (Chamberlin)

Paraiulus zakiwanus Chamberlin, 1910, Ann. Entom. Soc. America, 3: 253, pl. 39, figs. 6, 7, pl. 40, figs. 1-5. Type material unknown, presumed lost, from the Sacramento Mountains, Otero Co., New Mexico.

Hakiulus zakiwanus: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 137.

Genus **Litiulus** Chamberlin

Litiulus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 19. Type species: *Parajulus alaskanus* Cook, 1904, by original designation.

One species, Northwestern North America.

This genus was synonymized with *Karteroiulus* (Attems, 1909) by Hoffman (1980). While it is true that the respective type species are extremely close, perhaps it is desireable to maintain the younger name as provisionally valid pending a revision of the family (or that part of it).

Litiulus alaskanus (Cook)

Parajulus alaskanus Cook, 1904, Harriman Alaska Exped., 8: 70, pl. 5, figs. 4a-k. ♂ HT (USNM) from Metlakatla, Alaska.

Litiulus alaskanus: Chamberlin, 1940, Bull. Univ. Utah, 30(11): 19.

Range: Southern coast of Alaska, south at least as far as Philomath, Oregon (VMNH).

Genus **Mexicoiulus** Verhoeff

Mexicoiulus Verhoeff, 1926, Zool. Anz., 68: 66. Type species: *M. dampfi* Verhoeff, by monotypy.

One species, Mexico (Distrito Federal).

Incorrectly synonymized with *Parajulus* by Loomis, 1968, and Hoffman, 1980.

Mexicoiulus dampfi Verhoeff

Mexicoiulus dampfi Verhoeff, 1926, Zool. Anz., 68: 67, figs. 4-11. ♂ HT (ZSBS) from "Desierto de los Leones", Distrito Federal, Mexico.

Genus **Mulaikiulus** Chamberlin

Mulaikiulus Chamberlin, 1941, Bull. Univ. Utah, 30(12): 8. Type species: *M. stanleius* Chamberlin, by original designation.

One species, California.

Mulaikiulus stanleius Chamberlin

Mulaikiulus stanleius Chamberlin, 1941, Bull. Univ. Utah, 30(12): 8, figs. 12, 13. ♂ HT (USNM) from 12 miles north of Hammond, Tulare Co., California.

Genus **Okliulus** Causey

Okliulus Causey, 1950, Proc. Arkansas Acad. Sci., 3: 46. Type species: *O. carpenteri* Causey, by original designation.

Three species, Oklahoma, Louisiana, Arkansas.

Okliulus beveli Causey

Okliulus beveli Causey, 1953, American Midl. Nat., 50: 152, figs. 5-7. ♂ HT (AMNH) from Junction City, Union Co., Arkansas.

Okliulus carpenteri Causey

Okliulus carpenteri Causey, 1950, Proc. Arkansas Acad. Sci., 3: 9-12. ♂ HT (ANSP) from Wilburton, Latimer Co., Oklahoma.

Okliulus foliatus Loomis

Okliulus foliatus Loomis, 1968, Florida Entom., 51: 164, figs. 16-18. ♂ HT (USNM) from Bossier Parish, Louisiana, without further locality.

Genus **Oriulus** Chamberlin

Oriulus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 7. Type species: *O. medianus* Chamberlin, by original designation.

Eight names have been based on specimens apparently referable to this category, the majority from upland, interior, regions of the United States.

On a smaller scale, this nominal genus embodies all of the taxonomic difficulties that afflict the Parajulidae collectively. The distinction from *Aniulus* is not definitive, and most of the existing names are probably at best of subspecific rank. The type locality for *O. notus* is apparently a composite of two places.

Oriulus delus Chamberlin

Oriulus delus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 8, figs. 28, 29. ♂ HT (USNM) from Plattsburg, Clinton Co., New York.

Oriulus eutypus Chamberlin

Oriulus eutypus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 8, figs. 23, 24. ♂ HT (USNM) from Minneapolis, Minnesota.

Oriulus georgicolens Chamberlin

Oriulus georgicolens Chamberlin, 1940, Bull. Univ. Utah, 30(11): 9. ♂ HT (USNM) from Barrington, McIntosh Co., Georgia.

Oriulus grandiceps Loomis

Oriulus grandiceps Loomis, 1968, Florida Entom., 51: 165, figs. 19-23. ♂ HT (USNM) from Ellis County, Kansas, without closer locality..

Range: Reported also from Finney Co., Kansas.

Oriulus grayi Causey

Oriulus grayi Causey, 1950, Proc. Arkansas Acad. Sci., 3: 50, figs. 37-42. ♂ HT (ANSP) from DeVal's Bluff, Prairie Co., Arkansas.

Oriulus medianus Chamberlin

Oriulus medianus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 7, figs. 21, 22. ♂ HT (USNM) from Yellowstone National Park, Wyoming.

Range: Recorded from the Rocky Mountains from Montana to New Mexico, also from Iowa and Nebraska.

It is not clear how this species is to be distinguished from *O. venustus.*

Oriulus notus Chamberlin

Oriulus notus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 8, figs. 25-27. ♂ HT (USNM) from "South Carolina: Gallatin River near Taylor's Fork." There is no Gallatin River in South Carolina, but one does occur in Montana just west of Bozeman. There is a small settlement called Taylors in South Carolina, at which Chamberlin collected in 1910. Perhaps he somehow confused these two places while writing labels. I am inclined to consider the Montana site as more likely correct.

Oriulus venustus (Wood)

Iulus venustus Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 10; 1865, Trans. American Philos. Soc., 13: 197, figs. 27, 28. Type material not known to exist, from "Illinois" without further locality.

Parajulus venustus: Bollman, 1889, Proc. U. S. Nat. Mus., 11: 344. – Williams & Hefner, 1928, Bull. Ohio Biol. Surv., 18: 128, fig. 22.

Oriulus venustus: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 140.

Range: Northern United States, recorded by various authors from New York to Montana and Utah.

A type locality (West Frankfort, Franklin Co., Illinois) was suggested by Causey (in Chamberlin & Hoffman, 1958). As no neotype designation has yet been made and publicized, this localization - although entirely reasonable - can only be considered as provisional (ICZN Art.75: f).

Genus **Parajulus** Humbert & DeSaussure

Parajulus Humbert & DeSaussure, 1869, Rev. Mag. Zool., (2) 21: 155. Type species: *P. olmecus* Humbert & DeSaussure, by monotypy. – DeSaussure & Humbert, 1872, Miss. Sci. Mexique, Zool., (6) 2: 93 (extended description!). – Mauriès, 1972, Rev. suisse Zool., 79: 159.

Being unable to allocate generically the Mexican species placed in "*Parajulus*" from existing literature accounts (and many are not congeneric with *P. olmecus*), I have no choice than to place all but the type species in the category of "Species of Uncertain Generic Position."

Parajulus olmecus Humbert & DeSaussure

Parajulus olmecus Humbert & DeSaussure, 1869, Rev. Mag. Zool., (2) 21: 155. ♂ and ♀ STs (MHNG), from Moyoapan, near Fortin de las Flores, Veracruz, Mexico. ♂ lectotype designated by Mauriès, 1972.

Genus **Pheniulus** Chamberlin

Pheniulus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 29. Type species: *P. phenotypus* Chamberlin, by original designation.

Two species: Mexico.

Pheniulus mimeticus Chamberlin

Pheniulus mimeticus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 30, figs. 62, 63. ♂ HT (USNM) from Ixtapan del Oro, Distrito Federal, Mexico.

Pheniulus phenotypus Chamberlin

Pheniulus phenotypus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 30, figs. 59-61. ♂ HT (USNM) from Oaxtepec, Morelos, Mexico.

Genus **Pseudojulus** Bollman

Pseudojulus (as subgenus of *Parajulus*) Bollman, 1887, Entom. Americana, 2: 227. Type species: *Parajulus (Pseudojulus) obtectus* Bollman, by subsequent designation of Bollman, 1887, Ann. New York Acad. Sci. 4: 38.

Pseudojulus: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 141. – Hoffman, 1992, Jeffersoniana, 1: 14 (description).

One species, southeastern United States (Florida),

Pseudojulus obtectus (Bollman)

Parajulus (Pseudojulus) obtectus Bollman, 1887, Entom. Americana, 2: 227. Type material lost (formerly USNM), from "Bloomington, Indiana, and Pensacola, Florida"; restricted to Pensacola, Escambia Co., Florida by Chamberlin & Hoffman, 1958, although no neotype designation was made.

Pseudojulus obtectus: Hoffman, 1992, Jeffersoniana, 1: 16, figs. 15-21.

Range: Western Florida (Escambia and Santa Rosa cos.) (map, Hoffman, 1992, fig. 22).

Genus **Ptyoiulus** Cook

Ptyoiulus Cook, 1895, Ann. New York Acad. Sci., 9: 6. Type species: *Julus (Julus) pensylvanicus* Brandt, 1841, by original designation.

Three nominal species are recognized, eastern North America.

Removed from genus: *Paraiulus ectenes* Bollman, 1888 (see Parajulidae of Uncertain Generic Position or Validity).

Ptyoiulus coveanus Chamberlin

Ptyoiulus coveanus Chamberlin, 1943, Bull. Univ. Utah, 34(6): 10, figs. 24, 25. ♂ HT (FMNH) from Greenbrier Cove, Great Smoky Mountains National Park, Sevier Co., Tennessee.

Range: Reported also from North Carolina, Tennessee, and Illinois by Causey (1952), under the name *ectenes* Bollman.

Ptyoiulus georgiensis Chamberlin

Ptyoiulus georgiensis Chamberlin, 1943, Bull. Univ. Utah, 34(6): 12, figs. 26, 27. ♂ HT (USNM) from a site northwest of Clayton, Rabun Co., Georgia.

Range: Reported also from Alabama (Causey, 1952).

Ptyoiulus impressus (Say)

Julus impressus Say, 1821, Journ. Acad. Nat. Sci. Philadelphia, 2: 102. Type material not known to exist, type locality not stated, generally assumed to be the vicinity of Philadelphia, Pennsylvania.

Julus pensylvanicus [sic!] Brandt, 1841, Bull. scient. Acad. imp. Sci. St. Petersbourg, 8: 102. ♂ ♀ STs (ZMB) from "Pensylvanien" without further locality. Synonymized by Chamberlin & Hoffman, 1958.

Julus pennsylvanicus: Wood, 1865, Trans. American Philos. Soc., 13: 201, fig. 34. This emended spelling of specific name accepted by all subsequent authors.

Julus pilosiscutis Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 11. ST (ANSP) from Sesquehanna Co., Pennsylvania. Synonymized by Bollman, 1887.

Julus montanus Cope, 1869, Proc. American Philos. Soc., 11: 181. Type material not known to exist, from Montgomery Co., Virginia. Synonymized by Bollman, 1893.

Ptyoiulus pennsylvanicus: Cook, 1895, Ann. New York Acad. Sci. 9: 6. – Chamberlin, 1940, Bull. Univ. Utah, 30(11): 15, figs. 71-73.

Range: Unknown, prior to revision of the genus, but certainly widespread in eastern United States.

Identification of Say's name *impressus* with the well-known "pennsylvanicus" was at the initiative of Prof. Chamberlin in 1955. Despite many personal reservations about the possibility of making such a connection from Say's very equivocal description, I have never been able to convince myself that he was wrong in so doing and reluctantly maintain *impressus* as possibly the correct name. Designation of a neotype from Philadelphia is needed to stabilize this nomenclature.

Genus **Saiulus** Chamberlin

Saiulus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 12. Type species: *S. setifer* Chamberlin, by original designation.

One species, northwestern North America.

The validity of this taxon *vis-á-vis Uroblaniulus* remains to be examined.

Saiulus setifer Chamberlin

Saiulus setifer Chamberlin, 1940, Bull. Univ. Utah, 30(11): 12, figs. 44-47. ♂ HT (USNM) from Washington state: Puget Sound" without further locality.

Range: Periphery of Puget Sound in Washington and British Columbia.

Genus **Simiulus** Chamberlin

Simiulus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 20. Type species: *Parajulus arius* Chamberlin, 1918, by original designation.

One species, California.

Simiulus arius (Chamberlin)

Parajulus arius Chamberlin, 1918, Pomona Coll. Journ. Ent. & Zool., 10: 10. ♂ HT (?USNM) from Stanford, Santa Clara Co., California.

Simiulus arius: Chamberlin, 1940, Bull. Univ. Utah, 30(11): 20, fig. 65.

Genus **Sophiulus** Chamberlin

Sophiulus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 18. Type species: *Paraiulus tivius* Chamberlin, by original designation.

Two species, California.

Sophiulus lomondus Chamberlin

Sophiulus lomondus Chamberlin, 1941, Bull. Univ. Utah, 31(11): 20, figs. 33, 34. ♂ HT (USNM) from Ben Lomond, Santa Cruz Co., California.

Sophiulus tivius (Chamberlin)

Paraiulus tivius Chamberlin, 1912, Ann. Entom. Soc. America, 5: 163, pl. 11, figs. 1-7. ♂ HT (?MCZ) from Mill Valley, Marin Co., California.

Sophiulus tivius: Chamberlin, Bull. Univ. Utah, 30(11): 18, fig. 64.

Range: Periphery of San Francisco Bay, California.

Genus **Spathiulus** Chamberlin

Spathiulus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 14. Type species: *S. leptus* Chamberlin, by original designation.

Four species, central California.

Spathiulus elegantulus Causey

Spathiulus elegantulus Causey, 1950, Proc. Arkansas Acad. Sci., 3: 47, figs. 18-21. ♂ HT (INHS) from Happy Isle, Yosemite National Park, Mariposa Co., California.

Spathiulus leptus Chamberlin

Spathiulus leptus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 14, figs. 53-55. ♂ HT (USNM) from "Yosemite Park", California, probably that segment in Mariposa County.

Spathiulus tribolus Chamberlin

Spathiulus tribolus Chamberlin, 1941, Bull. Univ. Utah, 30(12): 8, figs. 14, 16. ♂ HT (USNM) from Sequoia National Park, 12 miles north of Hammond, Tulare Co., California.

Spathiulus tuolumnus Chamberlin

Spathiulus tuolumnus Chamberlin, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 68: 4, fig. 1. ♂ HT (USNM) from Pinecrest, Tuolumne Co., California.

Genus **Teniulus** Chamberlin

Teniulus Chamberlin, 1951, Great Basin Natur., 11: 21. Type species: *T. parvior* Chamberlin, by original designation.

Two species, eastern Tennessee (Great Smoky Mountains).

The status of this taxon as a genus different from *Uroblaniulus* seems extremely tenuous.

Teniulus parvior Chamberlin

Teniulus parvior Chamberlin, 1951, Great Basin Nat., 11: 23, figs, 10-12. ♂ HT (USNM) from Gatlinburg, Sevier Co., Tennessee.

Teniulus setosior Chamberlin

Teniulus setosior Chamberlin, 1951, Great Basin Natur., 11: 21, figs. 6-9. ♂ HT (USNM) from Gatlinburg, Sevier Co., Tennessee.

Genus **Thriniulus** Chamberlin

Thriniulus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 21. Type species: *Paraiulus leucoclius* Chamberlin, 1922, by original designation.

One species: Guatemala. Affirmation of the status of *"Thriniulus" schachti* Chamberlin, 1952, remains to be accomplished.

Thriniulus leucoclius (Chamberlin)

Paraiulus leucoclius Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 19, pl. 9, figs. 2-8. ♂ HT (USNM) from Actelá, Dept. Alta Verapaz, Guatemala.

Genus **Tuniulus** Chamberlin

Tuniulus Chamberlin, 1940, Bull. Univ. Utah, 31(11): 18. Type species: *Codiulus milpetanus (sic)* Chamberlin, 1940, by original designation.

Two (one?) species, California, ?Oregon.

Removed from genus: *Paraiulus hewitti* Chamberlin (see *Bollmaniulus).*

Tuniulus milpitanus (Chamberlin)

Codiulus milpetanus Chamberlin, 1940, Bull. Univ. Utah, 30(11): 20, fig. 70. ♂ HT (USNM) from Milpitas (erroneously spelled Milpetas by Chamberlin), Santa Clara Co., California.

Tuniulus milpetanus: Chamberlin, 1941, Bull. Univ. Utah, 31(11): 18.

Tuniulus milpitanus: Buckett, 1964, Annot. List Diplopoda California, p. 6.

Tuniulus oregonensis (Wood)

Julus oregonensis Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 11; 1865, Trans. American Philos. Soc., 13: 199, fig. 31. Location of type material unknown, probably lost, from "Oregon" without further data. Accuracy of the locality should not be assumed, in view of the striking similarity of the gonopods of these two nominal species.

Genus **Uroblaniulus** Attems

Uroblaniulus Attems, 1901, Mitt. Naturh. Mus. Hamburg, 18: 113. Type species: *U. megalodus* Attems, by monotypy.

Shoshoniulus Chamberlin, 1951, Great Basin Natur., 11: 23. Type species: *Saiulus atlantus* Chamberlin, by original designation. Synonymized by Hoffman, 1980.

Eleven species, many of uncertain validity, Quebec, Ontario, and Wisconsin south to Georgia and Alabama.

The composition of this genus is in disarray: many of the species names are surely junior synonyms, and it seems likely that the poorly-defined names *Saiulus, Shoshoniulus*, and *Teniulus* will have to be merged into *Uroblaniulus.* Only a complete revision can possibly bring order to the chaos and for the present my only recourse is to list most of the existing names without prejudice. Shelley (1988) has proposed to bring the names *immaculatus* Wood and *dux* Chamberlin into the synonymy of *canadensis*, and being based largely on data from type material, his conclusions are accepted here. The names based by Koch in 1847 cannot be referred with confidence to any of the newer species, and are provisionally listed in the category of parajulids of uncertain status although the generic position is unquestionable. They may have been based on the species here listed under the name *jerseyi* Causey.

Uroblaniulus atlantus (Chamberlin), new combination.

Saiulus atlantus Chamberlin, 1946, Ent. News, 57: 149, figs. 1-5. ♂ HT (USNM) from Atlanta (?Fulton Co.), Georgia.

Shoshoniulus atlantus: Chamberlin, 1951, Great Basin Natur., 11: 23.

Uroblaniulus canadensis (Newport)

Julus canadensis Newport, 1844, Ann. & Mag. Nat. Hist., 13: 268. ♀ HT (BMNH) from "Albany River, Hudson's Bay", Ontario. Verity of the stated locality cannot be assumed.

Julus immaculatus Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 0: 12; 1865, Trans. American Philos. Soc., 13: 200, fig. 33. 3♂, 2♀ ST (ANSP) from "Catskill Mountains, New York" without further locality. ♂ LT designated by Causey, 1950 (erroneously called "holotype").

Parajulus immaculatus: Bollman, 1887, Ann. New York Acad. Sci., 4: 44. – Brolemann, 1922, Ann. Ent. Soc. America, 15: 292, figs. 28-34.

Parajulus canadensis: Bollman, 1893, Bull. U. S. Nat. Mus. 46: 150.

?Uroblaniulus megalodus Attems, 1902, Mitt. Zool. Mus. Hamburg, 18: 114, figs. 1-5. Imm. ♂ HT (ZMH) from "Vermont" without further locality. Synonymized by Chamberlin & Hoffman, 1958.

Paraiulus dux Chamberlin, 1914, Canadian Entom., 46: 304. ♂ HT apparently lost (not at MCZ) from Douglas Lake, Cheboygan Co., Michigan. – Williams & Hefner, 1928, Bull. Ohio Biol. Surv., 18: 126, fig. 18. Synonymized by Shelley, 1988, from topotypes.

Saiulus immaculatus: Causey, 1950, Proc. Arkansas Acad. Sci., 3: 49, figs. 31-36.

Uroblaniulus immaculatus: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 148.

Uroblaniulus canadensis: Chamberlin & Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 71: 6.– Shelley, 1988, Canadian Journ. Zool., 66: 1648, figs. 18-20.

Range: Northeastern North America: Quebec and Maine to Michigan and southwestern Ontario, southern limits unknown..

The genitalia of the female holotype have been studied, and conform exactly to those of the lectoparatype female of *immaculatus* illustrated by Causey (1950), and other specimens from northeastern United States.

Uroblaniulus caroliniensis Causey

Uroblaniulus caroliniensis [*sic*!] Causey, 1953, American Midl. Nat., 50: 154, figs. 11, 12. Location of ♂ HT unknown (not at AMNH) from Raleigh, Wake Co., North Carolina.– Shelley, 1978, Journ. Nat. Hist., 12: 49, figs. 10, 11.

Uroblaniulus dixinus Chamberlin

Uroblaniulus dixinus Chamberlin, 1951, Great Basin Nat., 11: 21, figs. 4, 5. ♂ HT (USNM) from Gatlinburg, Sevier Co., Tennessee.

Uroblaniulus exul Chamberlin

Uroblaniulus exul Chamberlin, 1951, Great Basin Natur., 11: 19, figs. 1-3. ♂ HT (USNM) from Gatlinburg, Sevier Co., Tennessee.

Uroblaniulus fumans (Chamberlin)

Saiulus fumans Chamberlin, 1943, Bull. Univ. Utah, 34(6): 10, fig. 23. ♂ HT (FMNH) from Gatlinburg, Sevier Co., Tennessee.

Uroblaniulus fumans: Chamberlin, 1951, Great Basin Natur., 11: 19.

Uroblaniulus idahoanus (Chamberlin), new combination.

Uroblaniulus idahoanus Chamberlin, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 68: 5, fig. 2. ♂ HT (USNM) from Pierce, Clearwater Co., Idaho.

Shoshoniulus idahoanus: Chamberlin, 1951, Great Basin Natur., 11: 23.

Uroblaniulus jerseyi (Causey)

Saiulus jerseyi [*sic*!] Causey, 1950. Proc. Arkansas Acad. Sci., 3: 48, figs. 27-30. ♂ HT (ANSP) from Rockaway, Morris Co., New Jersey.

This name is incorrectly formed unless it is understood to be a patronym for the Duke of Jersey (or someone else named Jersey) rather than alluding to the state in which the type locality is located in which case *jerseyensis* would be the correct spelling..

Range: Unknown, possibly south to Virginia.

Uroblaniulus montanus (Hoffman)

Saiulus montanus Hoffman, 1949, Proc. Biol. Soc. Washington, 62: 81, figs. 5, 6. ♂ HT (USNM) from Mount Rogers, Grayson Co., Virginia.

Uroblaniulus montanus: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 148.

Range: Appalachian Mountains in southwestern Virginia. This form is almost certainly a southern subspecies of *U. canadensis*, if distinguishable at all.

Uroblaniulus sandersoni (Causey)

Saiulus sandersoni Causey, 1950, Proc. Arkansas Acad. Sci., 3: 48, figs. 22-26. ♂ HT (INHS) from La Rue, Union Co., Illinois.

Uroblaniulus stolidus Causey

Uroblaniulus stolidus Causey, 1953, Proc. Arkansas Acad. Sci., 5: 22, figs. 6-9. ♂ HT (AMNH) from Peninsular State Park, Door Co., Wisconsin.

Range: Known also from Kalkaska Co., Michigan (VMNH) and southwestern Ontario (Shelley, 1988).

PARAJULIDAE OF UNCERTAIN GENERIC POSITION OR VALIDITY

(Original spellings preserved; sequence alphabetical by species name)

Paraiulus amulensis Pocock, 1903, Biol. Centr.-Amer., Diplopoda, p. 55, pl. V, figs. 9-9d. ♂♀ ST (BMNH) from Amula, Guerrero, Mexico.

Paraiulus aztecus Pocock, 1903, Biol. Centr.-Amer., Diplopoda, p. 56, pl. V, figs. 10-10b. ♂♀ ST (BMNH) from Omilteme, Guerrero, Mexico.

Julus caesius Wood, 1867, Proc. Acad. Nat. Sci. Philadelphia, 19: 43. Type material presumed lost, from "Texas" without closer locality. This name could be referred to any of four or five Texan genera.

Spirostreptus clavipes Koch, 1847, Syst. Myriap., in: Panzer, Krit. Rev. Insectenf. Deutschl., 3: 107; 1863, Die Myriapoden, 2: 103, pl. 115, fig. 226. Location of ♂ HT unknown (possibly BMNH), from "Pensylvanien" without further locality.

Parajulus cockerelli Miner, 1926, American Mus. Nov., 219: 3, figs. 1-5. ♂ HT (AMNH) from shale of Miocene age at Florissant, Colorado. If Miner's reconstruction (Fig. 5) is correct, the exposed male genitalia suggest a genus similar to *Bollmaniulus* or perhaps *Ptyoiulus.*

Parajulus ectenes Bollman, 1888 ("1887"), Proc. U. S. Nat. Mus., 10: 617. ♂ ST lost, ♀ ST (USNM) from Chapel Hill, Orange Co., North Carolina. Bollman's perceptions of gonopod structure were so extremely generalized that when he wrote that the genitalia of *ectenes* were "entirely different" from those of *pennsylvanicus (=impressus)*, we may assume generic level differences with complete confidence (unless, of course, he had an immature male before him). The extant female, personally examined, does not appear to be a species of *Ptyoiulus.*

Iulus ellipticus Bollman, 1887, American Natur., 21: 82. 2 ♀ ST (formerly USNM, present status unknown) from Fort Snelling [not located], Minnesota. Synonymized with *Hakiulus diversifrons* by Chamberlin & Hoffman, 1958, but perhaps in error. In a posthumously published paper (1893) Bollman recorded both species from Winona, Minnesota, at the same time he synonymized *castaneus* under *diversifrons.* If *ellipticus* IS a distinct species, to what genus might it belong? Bollman never alluded to gonopod structure, even though he characterized the species as "very common" at Winona, and doubtless had adult males.

Julus filicornis DeSaussure, 1860, Mém. Soc. Phys. Hist. Nat. Genève, 15: 377, pl. 5, fig. 38-38d. Imm. ♂ HT (?MHNG) from Vera Cruz, Mexico, presumably the city by that name.

Julus florissantellus Cockerell, 1907, Bull. American Mus. Nat. Hist., 23: 000. Type material (AMNH) from Miocene shales at Florissant, Colorado. Is this possibly a senior synonym of *P. cockerelli* Miner?

Paraiulus gyratus Loomis, 1971 ("1969"), An. Inst. Biol. Univ. Nac. Mexico, ser. zool., 1: 51, fig. 2-5. ♂ HT (USNM) from Pedregal San Angel, Distrito Federal, Mexico.

Paraiulus lateralis Loomis, 1971 ("1969"), An. Inst. Biol. Univ. Nal. Mexico, ser. zool. 1: 51, figs. 6-8. ♀ HT (USNM) from "six km from Bochil", Chiapas, Mexico.

Parajulus neomexicanus Chamberlin, 1903, Preoc. Acad. Nat. Sci. Philadelphia, 55: 38. Location of type material unknown, probably lost, from Beulah, San Miguel Co., New Mexico. Referred to *Hakiulus* by Chamberlin (1940: 11), but the published description of the gonopods is totally inadequate for deduction of a generic position.

Spirostreptus nutans Koch, 1847, Syst. Myriap., in: Panzer, Krit. Rev. Insectenf. Deutschl., 3: 104; 1863, Die Myriapoden, 1: 14, pl. 7, fig. 14. Location of ♀ HT unknown (possibly BMNH), from "Nord-amerika" without further locality. This is almost certainly the female of *S. clavipes* Koch.

Paraiulus oregonensis Attems, 1903, Zool. Jahrb, Abt. Syst., 18: 91. ♀ HT (NMW) labeled only "Fahrt nach Portland" ("journey to Portland", from where? Seattle?), presumed to be Portland, Oregon. Probably not congeneric with *Julus oregonensis* Wood, more likely to be a species of *Bollmaniulus*. Omitted from the 1958 Checklist.

Parajulus perditus Chamberlin, 1920, Canadian Entom., 52: 167. ♀ ST (MCZ) from Waterton Lake, British Columbia.

Paraiulus pueblanus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 30, figs. 52. ♂ HT (USNM) from Rio Frio, Puebla, Mexico.

Paraiulus phlobius Chamberlin, 1942, Proc. Biol. Soc. Washington, 55: 60, figs. 12, 13. ♂ HT (USNM) from Cerro Tancitaro, Michoacan, Mexico.

Julus rasilis Karsch, 1881, Zeitschr. Ges. Naturwiss. (3) 6: 17. ♂♀ ST (ZMB) from Puebla, Mexico, without further specification, probably the city rather than the state by that name..

Paraiulus rosanus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 31, figs. 53-55. ♂ HT (USNM) from Santa Rosa, Distrito Federal, Mexico.

Paraiulus furcifer var. **sinampus** Chamberlin, 1910, Ann. Entom. Soc. America, 3: 256, pl. 41, figs. 5-8, pl. 42, figs. 1, 2. Imm. ♂ HT (lost) from Portland, Oregon. Were genuine new species known from adult males in such dire short supply as to warrant naming an immature specimen of even uncertain generic position?

Thriniulus schachti Chamberlin, 1941, Bull. Univ. Utah, 31(1): 20, figs. 35, 36. ♂ HT (USNM) from Tancitaro, Michoacan, Mexico. Correctness of the generic assignment cannot be assumed.

Paraiulus schmidti Chamberlin, 1952, Great Basin Natur., 12: 18, figs. 20, 21. ♂ HT (FMNH) from Volcán Tajumulco, Dept. San Marcos, Guatemala.

Paraiulus stylifer Pocock, 1903, Biol. Centr.-Amer., Diplopoda, p. 57, text fig. 2, pl. V, figs. 11, 11a. ♂♀ ST (BMNH) from Guatemala, without further locality.

Julus tarascus DeSaussure, 1860, Mèm. Soc. Phys. Nat. Hist. Genève, 15: 378, fig. 52. ♀ HT (MHNG?) from Angaugueo district, Michoacan, Mexico.

Paraiulus timpius Chamberlin, 1912, Ann. Entom. Soc. America, 5: 165, pl. 11, figs. 8, 9. ♂♀F ST lost, from "Las Valles, New Mexico", a locality so far unknown to me. This name was omitted from the 1958 Checklist.

Parajulus varius Bollman, 1887, Ann. New York Acad. Sci., 4: 38. ST (?USNM) from San Diego, Ukiah, and Rosario Mission, California. San Diego was suggested as a restricted type locality by Chamberlin & Hoffman, 1958: 150, without however designation of a lectotype.

Paraiulus zempoalus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 31, figs. 56-58. ♂ HT (USNM) from Parque Nacional de Zempoala, Morelos, Mexico.

Parajulus zonatus Bollman, 1887, Proc. U. S. Nat. Mus., 10: 618. ♂ ST (originally USNM, present status unknown) from Chehalis, Lewis Co., Washington. Bollman's statement that the gonopods "differ very remarkably from those of *P. furcifer*. . ." exclude this species from *Bollmaniulus* and pose the question of what genus might be represented (unless, of course, Bollman's male was immature)..

Family Julidae Leach

Julides Leach, 1814, in Brewster (ed.): Edinburgh Encyclopaedia, 7: 387 (name only, taxon equivalent to modern Julida+Spirobolida+Spirostreptida+Chordeumatida).

Iulidae Cook, 1895, Ann. New York Acad. Sci., 9: 6 (first use of the name in its current sense, i.e., exclusive of nemasomatids and blaniulids). – Julidae Silvestri, 1895, Ann. Mus. Civ. Stor. Nat. Genova, 36:175.

Julidae Attems, 1926, Handb. Zool., 4: 186. – Hoffman, 1980, Classification of the Diplopoda, p. 109.

Up to and including Bollman, 1893, the term Julidae(Iuliden, Julides), was used to include all species now referred to the order Julida, or frequently, all "juliform" diplopods.Even in 1894, Verhoeff's conceptof the family included blaniulids.The two independently compiled classifications by Cook and Silvestri are the earliest known to me, in which the family takes on its current definition.Attems' arrangement of 1926 remains the framework upon which current revisionary work is based (although his tribes have been given subfamily rank).

Ten species of this Old World family have been reported from localities in North America, whence introduced in soil, produce, plants, or ballast.Some (e.g., *Ophyiulus pilosus*) have become very successfully naturalized in eastern United States,to the extent of largely displacing the native fauna in New York and New England.Others have been found only once of twice, and their present status remains to be examined.Since almost any European julid has the potential of being introduced, appeal must be made to the standard European references (Schubart, 1934; Blower, 1985, Demange, 1981) in making identifications of julids picked up particularly in port cities and adjacent cultivated regions.

In the following entries for these immigrant millipeds, only the more significant papers relating to name changes are mentioned, enough to clarify the often confusing and contradictory previous references.No attempt is made to include all of the synonymous names that have been proposed in the European literature.

It is felt that no useful end would be served by the inclusion of subgeneric names, most of which are both equivocal in concept and inconstant in previous application.Distinction of the genera themselves is by no means a satisfactory *fait accompli.*

Genus **Brachyiulus** Berlese

Campodes Koch, 1847, Syst. Myr., in: Krit. Rev. Insectenf. Deutschlands, 51: 126. Type species: *Campodes flavicornis* Koch, by subsequent designation of Bollman, 1893.

Brachyiulus Berlese, 1884, Acari, Myriapoda, Scorpiones. . .Italia, 12: 1-6. Type species: *Julus stuxbergi* Fanzago, 1875, by subsequent designation of Berlese, 1886, through its inclusion in the synonymy of *Julus pusillus* Leach (not one of the originally included species).(ICZN, 69, a (v), 1985).

Julus (Anoploiulus) Verhoeff, 1894, Verh. Zool.-bot. Gesell. Wien, 44: 151. Type species: *Julus pusillus* Leach, 1815, by subsequent designation of Pocock, 1895.

Brachyiulus (Microbrachyiulus) Verhoeff, 1897, Zool. Anz., 20: 114. Type species: *Julus pusillus* Leach, 1815, by monotypy.

About seven species, mostly native to the Mediterranean region, several widespread in western Europe and introduced elsewhere.

The identity of Koch's genus *Campodes*, which he had mistaken to be a chordeumatoid (in which he was followed by C. H. Bollman, 1893) was unequivocally established by Cook & Collins (1895: 30). These authors correctly considered Koch's two species *flavicornis* and *fuscicornis* to be synonymous, and in turn probably the same as *Julus virgatus* Wood (1864) which they believed to be a close relative of *J. pusillus.* The priority of *Campodes* over *Brachyiulus* was tacitly overlooked by European investigators; perhaps they had not seen the paper of Cook & Collins. It is amazing that Verhoeff (1905) who identified many of the species figured by Koch in 1863, passed over *Campodes* in silence despite the obvious brachyiuline traits of its two nominal species. In reminding of this situation in 1980, I did not observe the valid claims of *Campodes* to be reinstated, believing that one or more European workers might petition the International Commission to rescue *Brachyiulus* by placing it on the Official List of Names in Zoology. To date, no one has taken this step, and *Brachyiulus* survives on by default.

The recent discovery by Dr. Rowland Shelley of *Brachyiulus lusitanus* at several sites in North Carolina raises some unpleasant problems related to the status of names based on American material of this genus and heretofore consigned to *pusillus* because that was the only *Brachyiulus* recognized for this continent. It is entirely possible that some of the names listed provisionally under *pusillus*, below, may have been based on *lusitanus* instead, but the lack of genuine type material may preclude a conclusive solution.

Brachyiulus lusitanus Verhoeff

Brachyiulus (Microbrachyiulus) pusillus lusitanus Verhoeff, 1898, Arch. Naturgesch., 64: 153, pl. 6, fig. 28. ♂ HT (ZMB) from vicinity of Coimbra, Portugal.

Microbrachyiulus lusitanus: Verhoeff, 1910, Nova Acta, Abh. Kaiserl. Leop.-Carol. Deutschen Akad. Naturf., 42: 228.

Microbrachyiulus calcivagus Verhoeff, 1910, Nova Acta, Abh. Kaiserl. Leop.-Carol. Deutschen Akad. Naturf., 42: 225, pl. 2, fig. 34. Type material not entirely traced, ♂ ST (ZMB), from Castellamare, Sorrento, Campania, Italy. Synonymized by Strasser, 1969.

Brachyiulus pusillus: Shelley, 1978, Journ. Nat. Hist., 12: 46, fig. 5.

Range: Mediterranean region, Italy to Portugal, also recorded from the Caucasus region, Madeira, the Azores, and the Canary Islands, doubtless an anthropochoric distribution. In North America, known from two localities in the Piedmont region of North Carolina and one in California, and is probably widespread elsewhere. All existing material labeled "pusillus" in American museums must be re-examined, and published records held in suspicion.

Brachyiulus pusillus (Leach)

Julus pusillus Leach, 1815, Trans. Linnean Soc. London, 11: 379. Type material (BMNH) from London and Edinburg, presumably no type locality has been established by a lectotype designation.

?Julus exiguus Brandt, 1841, Bull. Scient. Acad. Imp. Sci.. St. Petersbourg, 8: 100. ♂♀ ST (ZMB) from "Pensylvanien" without further locality. Synonymized with *J. pusillus* by Chamberlin, 1921.

?Campodes flavicornis C. L. Koch, 1847, in Krit. Rev. Insectenf. Deutschlands, 51: 126; 1863, Die Myriapoden, 2: 17, pl. 68, fig. 140. Types not known to exist, from "Pensylvanien".

?Campodes fuscicornis C. L. Koch, 1847, in Krit. Rev. Insectenf. Deutschlands, 51: 126; 1863, Die Myriapoden, 2: 16, pl. 68, fig. 139. Types not known to exist, from "Pensylvanien." Synonymized with *C. flavicornis* by Bollman, 1893.

?Julus virgatus Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 14 ; 1865, Trans. American Philos. Soc., 13: 205. Location of types, if extant, unknown, from Philadelphia, Pennsylvania, and Washington, D. C. Synonymy with *Campodes flavicornis* implied by Cook & Collins, 1895; synonymized with *J. pusillus* by Chamberlin, 1921.

Brachyiulus (Microbrachyiulus) littoralis Verhoeff, 1898, Arch. Naturg., 64: 154, fig. 29. ST (ZMB) from localities in Germany, Austria, and Dalmatia, no lectotype yet designated. Synonymized with *pusillus* by Bagnall, 1918.

Brachyiulus littoralis: Schubart, 1934, Tierwelt Deutschlands,28: 276, fig. 431, and many other Continental writers post-Verhoeff 1898.

Brachyiulus pusillus: Schubart, 1966, South African Animal Life, 12: 21, fig. 11.

Range : Widespread in western Europe from Scandinavia and Scotland to Albania and Italy, also introduced into Easter Island, St. Helena, the Azores, Madeira, the Canary Islands, Argentina, and South Africa; probably widespread in much of North America but records compromised by possibility of confusion with *B. lusitanus.*

Various authors, including Chamberlin & Hoffman, 1958, included *Julus stuxbergi* Fanzago, 1875, in the synonymy of *pusillus*; this name is currently being recognized as valid for a different species of the genus in the Mediterranean region.

Genus **Cylindroiulus** Verhoeff

Cylindroiulus (as subgenus of *Iulus*) Verhoeff, 1894, Verh. Zool. Bot. Gesellsch. Wien, 44: 155. Type species: *Iulus luridus* "variety" *meinerti* Verhoeff, 1891, by monotypy.

Diploiulus (as subgenus of *Julus*) Berlese, 1886, Boll. Soc. Entom. Italia, 18: 202. Type species: *Julus rufifrons* C. L. Koch, 1847 [sensu Berlese, 1886], invalid typification: *rufifrons* not included in the original composition of this taxon (Berlese, 1883, Acari, Myriapoda, Scorpiones.....Italia reperta, VIII: 1). – Chamberlin, 1921, Proc. Biol. Soc. Washington, 34: 81.– Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 119.

Cylindroiulus (as genus) Verhoeff, 1899, Arch. Naturg., 65: 213. – Attems, 1927, Arch. Naturg., (A) 92: 175 (synopsis; key to nine subgenera; keys to species of most subgenera; *Julus luridus* C. L. Koch erroneously designated as type species).

Neottiulus Loomis, 1972, Florida Entom., 55: 149. Type species: *N. striatus* Loomis, by original designation. Synonymized with *Allajulus* by Hoffman, 1980.

Cylindroiulus (as subgenus of *Allajulus,* with three species only): Hoffman, 1980, Classification of the Diplopoda, p. 110.

Cylindroiulus (restored to generic rank): Read, 1990, Entom. Scandinavica, 21: 106.

An undetermined number of species in the Palearctic Region; several widely dispersed through commerce in plants and soil.

The name of this taxon has undergone an intereresting progression of changes, as briefly outlined above. *Diploiulus* was consistently used by American workers following the precedent of Chamberlin (1921), who did not realize that the original proposal of that name in 1883 did **not** include *Julus rufifrons*, a point also overlooked by Berlese himself three years later (1886). Jeekel (1970: 157) correctly selected *Julus dalmaticus* Koch, 1847, one of the two original species, and thus removed *Diploiulus* from any further consideration in this context.

The sole absolute criterion advanced by Read (op. cit.) to justify generic status for *Cylindroiulus* is the absence of setae on the metazona. In view of the considerable diversity of gonopod structure within the taxon so defined, the view might be taken that the lack of setae is a "loss-character" homoplasy that could recur several times independently, instead of being an synapomorphy for all such species.

Cylindroiulus britannicus (Verhoeff)

Iulus britannicus Verhoeff, 1891, Berliner Entom. Zeitschr., 36: 147, figs. 41, 42. Location of type material unknown, probably lost, from "Südengland" without further locality.

Cylindroiulus britannicus: Schubart, 1934, Tierwelt Deutschlands, 28: 228, fig. 361. – Palmén, 1952, Ann.Zool. Soc. 'Vanamo', 15(1): 20. – Blower, 1953, Ann. Mag. Nat. Hist. (12) 6: 307.

Diploiulus luscus: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 120.

Range: Western Europe, from Scotland to the Azores; introduced into Brazil, southern India,New Zealand, South Africa, Newfoundland and possibly elsewhere (some records for *C. latestriatus* may have been based on this very similar species).

As first noted by Schubart (1926) the type series of *luscus* is a mixture of the two species better known under the names *latestriatus* (Curtis) and *britannicus* (Verhoeff). Dr. R. V. Chamberlin, who wrote the entries for Julidae in the 1958 Checklist, believed that the name *luscus* - having priority - should be associated with the specimens identifiable as *britannicus*, which name would thus become a junior subjective synonym of *luscus*. As he did not consult the Meinert types and designate a lectotype to secure his intention, his action was not nomenclatorially binding. The status of *luscus* was finally fixed by Korsós & Enghoff (1990) who selected a male identifiable as *latestriatus* as lectotype. Rule *Britannicus!*

Cylindroiulus caeruleocinctus (Wood)

Julus caeruleocinctus Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 14. Type material lost, from Pennsylvania, probably in or near Philadelphia..

Julus teutonicus Pocock, 1900, Ann. Mag. Nat. Hist., (7) 6: 206. ST (BMNH) from Sevenoaks, Kent, England.

Diploiulus londinensis: Chamberlin, 1921, Proc. Biol. Soc. Washington, 34: 82.

Cylindroiulus caeruleocinctus: Mauriès, 1964, Bull. Soc. Hist. Natur. Toulouse, 99: 444.

Range: Northern Europe, introduced into and now widespread in North America.

The tangled skein involving the status of the names *caeruleocinctus, teutonicus, londinensis,* and *finitimus* was clarified by Blower (1958: 63) and Mauriès (1964: 444).

Cylindroiulus latestriatus (Curtis)

Julus latestriatus Curtis, 1845, Journ. Roy. Agr. Soc. England, 5: 229. Five ST (BMNH) from Nantwich, Cheshire, England; ♂ LT designated by Brade-Birks, 1922.

Julus hortensis Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 14; 1865, Trans. American Philos. Soc., 13: 205. Type material unknown, probably lost, from Philadelphia, Pennsylvania. Synonymized with *londinensis* Leach by Chamberlin, 1921; with *latestriatus* by Chamberlin & Hoffman, 1958.

Julus luscus Meinert, 1868, Natur. Tidsskr. 5: 9. ♂♀ ST (ZMUC) from Denmark. Synonymized with latestriatus by Korsós & Enghoff (1990), through their selection of a lectotype conspecific with the type of that name.

Julus Oweni Bollman, 1887, Entom. Americana, 2: 228. Type material (?USNM) from New Harmony, Posey Co., Indiana. Synonymized with *latestriatus* by Blower, 1953; previously with *luscus* Meinert, by Chamberlin, 1921.

Iulus (Allaiulus) frisius Verhoeff, 1891, Berliner Entom. Zeitschr., 36: 133, figs. 17-21. Type material unknown, probably lost, from Norderney Island, Oldenburg, Germany.

Cylindroiulus frisius: Verhoeff, 1899, Arch. Naturg., 65: 203.

Julus hesperus Chamberlin, 1914, Canadian Entom., 46: 314, fig. X. ♂ HT (MCZ) from Los Angeles, California. Synonymized with "*luscus* Meinert" (= *latestriatus)* by Chamberlin, 1921.

Cylindroiulus frisius oceanicus Verhoeff, 1920, in: Skottsberg, The natural history of Juan Fernandez and Easter Island, 3: 406, pl. 13, fig. 1. ST (?ZSBS) from Juan Fernandez Island, Chile. Synonymized with *frisius* by Schubart, 1934.

Cylindroiulus latestriatus: Brade-Birks, 1928, Ann. Mag. Nat. Hist., (10) 1: 397. – Blower, 1953, Ann. Mag. Nat. Hist., (12) 6: 306.

Cylindroiulus (Aneulobiulus) frisius: Schubart, 1934, Tierwelt Deutschlands, 28: 226, figs. 359, 360.

Diploiulus hortensis: Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 35.

Diploiulus latistriatus latistriatus: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 119.

Neottiulus striatus Loomis, 1972, Florida Entom., 55: 149. ♂ HT (USNM) from Bellingham, Whatcom Co., Washington. Synonymized by Hoffman, 1980.

Range: Western Europe, where partly synanthropic; southern Scandinavia; not recorded south of the Alps; introduced by commerce into North America where now acclimatized in urban areas from New England to California and Washington; Azores, Madeira, Canary Islands; South Africa; South India; Juan Fernandez; New Zealand. Apparently not a successful colonizer in equatorial countries.

The spelling "*latistriatus*" in the original description (and repeated by Chamberlin & Hoffman, 1958, inter alia) has been shown to be a typographical error.

Cylindroiulus punctatus (Leach)

Julus punctatus Leach, 1815, Trans. Linnean Soc. London, 11: 379. Type material (?BMNH) from England, without further locality.

Julus silvarum Meinert, 1868, Naturh.Tidsskr., (3) 15: 13. Type material (ZMUC) from several localities in Denmark. Apparently a lectotype has not been designated and type locality thus not fixed.

Cylindroiulus punctatus: Brade-Birks, 1919, Bull. Soc. Zool. France, 44: 65.

Cylindroiulus silvarum: Schubart, 1934, Tierwelt Deutschlands, 28: 221, figs. 351, 352. – Jawlowski, 1939, Frag. Faun. Mus. Zool. Polonici, 4: 156.

Range: Western Europe; introduced into Newfoundland.

Cylindroiulus truncorum (Silvestri)

Diploiulus truncorum Silvestri, 1896, Natur. Siciliano, n.s., 1: 160, pl. 7, figs. 11-13. ST (LEAP; Budapest, ?elsewhere), from Ain-Draham (west of Beja), Tunisia.

Iulus (Anoploiulus) africanus Brolemann, 1897, Ann. Sci. Nat., (8) 4: 271, figs. 39-41. ♂♀ ST (?MHNP) from four places in Algeria, none specified as type locality. Synonymized by Attems, 1927.

Cylindroiulus truncorum: Attems, 1908, in: Voyage zoologique en Khroumirie (Tunisie) par Henri Gadeau de Kerville: 112, figs. 10-12. – Schubart, 1934, Tierwelt Deutschlands, 28: 222, figs. 353-355. – Korsós & Enghoff, 1990, Entom. Scandinavica, 21: 347, figs. 1, 5-8, 21, 30, 31 (revision of the "*truncorum*-group" of *Cylindroiulus.*

Diploiulus africanus: Chamberlin, 1923, Proc. Biol. Soc. Washington, 36: 191.

Range: North Africa (Tunisia, Algeria); synanthropic in western Europe , Madeira, the Canary Islands, and at scattered localities in North America, Brazil, and South Africa.

Cylindroiulus vulnerarius (Berlese)

Mesoiulus vulnerarius Berlese, 1888, Acari, Myriapoda, Scorpiones. . . Italia, 48: pl. 1, fig.s. 1-7. Location of type material unknown, from vicinity of Florence (Firenze), Italy.

Cylindroiulus vulnerarius: Verhoeff, 1912, Zool. Anz., 40: 221, fig. 1. – Schubart, 1934, Tierwelt Deutschlands, 28: 203, fig. 327.– Shelley & Whitney, 1994, Entom. Month. Mag., 130: 189.

Range: Apparently native in north-central Italy, occurring synanthropically in northern Europe, in gardens and hothouses; introduced into Vancouver, British Columbia and possibly established there (Shelley & Whitney, 1994).

Genus **Julus** Linnaeus

Julus Linnaeus, 1958, Syst. Natur. (10th ed.): 639. Type species: *J. terrestris* Linnaeus, 1758, by subsequent designation of Latreille, 1810.

About five species, northern Europe, one introduced into North America.

Julus scandinavius Latzel

Iulus (Ommatoiulus) scandinavius Latzel, 1884, Myr. Austr.-ungarn. Monarch., 2: 322, figs. 130-132. ?ST (NMW) from several localities in Austria including Kirchdorf and Wien (V. Stagl, in litt.), lectotypification is required to establish a type locality.

Iulus scandinavius: Schubart, 1934, Tierwelt Deutschlands, 28: 235, figs. 373-378.

Julus scandinavius: Jeekel, 1973, Entom. Bericht., 33: 101.

Range: Western Europe, from France through southern Scandinavia, southward to Hungary; no records south of the Alps. Introduced into North America where found at Boston, Massachusetts, by Jeekel (1973). It is not known if this colony has persisted.

Genus **Ophyiulus** Berlese

Julus (Ophyiulus) Berlese, 1884, Acari, Myriapoda, scorpiones.....Italia, 12, 1-6. Type species: *Julus terrestris* sensu Koch 1863 non Linnaeus, 1758, sensu Berlese 1884 (= *Julus fallax* Meinert = *Julus pilosus* Newport).

Julus (Ophiulus) Berlese, 1886, Boll. Soc. Entom. Italiano, 18: 189.

Ophiulus: Attems, 1927, Arch. Naturg., 92 (A): 138 (synopsis of genus, key to 15 species and subspecies).

About 18 nominal taxa, dominantly in the Appennine peninsula, one species with marked dispersal capabilities.

I have not attempted to document all of the numerous variant spellings, synonyms, and combinations involved in the literature treating the following species; the early history is summarized by Schubart, 1934.

Ophyiulus pilosus (Newport)

Julus pilosus Newport, 1843, Ann. Mag. Nat. Hist., 11: 316. Type material (?BMNH) from Hampstead, now a district in west London, England. – Pocock, 1893, Ann. Mag. Nat. Hist., (6) 11: 249.

Julus canaliculatus Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 12; 1865, Trans. American Philos. Soc., 13: 201. Types not known to exist, from Chester Co., Pennsylvania.

Julus laqueatus Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 13; 1865, Trans. American Philos. Soc., 13: 202. Types not known to exist, from Chester Co., Pennsylvania.

Julus fallax Meinert, 1868, Naturh. Tidskkr. (3) 5: 15. ST (ZMUC) from Kobenhavn, Denmark.

Julus (Leptoiulus) fallax: Verhoeff, 1898, Arch. Naturg. 64: 132.

Ophiulus longabo (non sensu Koch) Chamberlin, 1921, Proc. Biol. Soc. Washington, 34: 83.

Ophyiulus pilosus: Chamberlin, 1922, Proc. Biol. Soc. Washington, 35: 9, and subsequent references by American authors.

Range: Probably native to northern Italy, now sporadically widespread in western Europe; abundant and naturalized in much of northeastern United States and adjacent Canada.

Chamberlin (1921) felt that several species of julids named by C. L. Koch were junior synonyms of *pilosus.* Verhoeff (1905), who tried to identify the millipeds illustrated in Koch's 1863 icongraphy, felt that *Julus longabo* might have been based on either *Leptoiulus alemannicus* or *Julus ligulifer,* and that *J. ferreus* and *serpentinus* could not be recognized with any confidence. Considering Verhoeff's acknowledged authority on central European millipeds, I have not followed Chamberlin's initiative.

Julida of uncertain identity

Two names based upon Pleistocene fossils from California caves are entered here solely because of their original generic assignment (by someone who knew little about Diplopoda). It is not certain that either are actually members of this order. As the type material is still extant, perhaps its examination could lead to a more confident placement, although interpreting milliped fossils is usually an execise in futility. Presumably these remains are those of species still occurring in the region, and in any event their names constitute nomenclatorial realities to be disposed in some way other than benign neglect.

Julus occidentalis Grinnell, 1908, Univ. California Publ. Geology, 5: 209, figs. 9-11. Type material (Univ. California at Berkeley) from Samwel Cave, 15 miles up the McCloud River from Baird, Shasta Co., California. The dimensions cited by Grinnell (width 6 mm, perhaps of a flattened segment) suggest the possibility of a large parajulid or, equally likely, a spiroboloid.

Julus cavicola Grinnell, 1908, Univ. California Publ. Geology, 5: 210, figs. 1, 5, 10, 12. Type material (Univ. California at Berkeley) from Potter Creek Cave near Baird, Shasta Co., California.

Order Siphoniulida

Family Siphoniulidae Pocock

Siphoniulidae Pocock, 1894, in Weber, Zool. Ergeb. Reise Niederl. Ost-Ind., 3: 340.

Genus **Siphoniulus** Pocock

Siphoniulus Pocock, 1894, in Weber, Zool. Ergeb. Reise Niederl. Ost-Ind., 3: 340. Type species, *S. albus* Pocock, by original designation.

Two species, Sumatra, Guatemala.

Siphoniulus neotropicus Hoffman

Siphoniulus neotropicus Hoffman, 1979, Rev. suisse Zool., 86: 536, figs. 1-6. F HT (MHNG) from Tikal, Dept. Peten, Guatemala.

Order Platydesmida DeSaussure

Family Platydesmidae DeSaussure

Platydesmii DeSaussure, 1860, Mém. Soc. Phys. Hist. nat. Genève, 15: 34 (as a tribe within the family Polydesmides).

Platydesmidae Cook, 1895, Ann. New York Acad. Sci., 9: 5.

Two genera, Mexico to Panama.

Genus **Desmethus** Chamberlin

Desmethus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 6. Type species: *D. setifer* Chamberlin, by original designation.

Two species: Panama to Guatemala.

Desmethus chiriquensis Loomis

Desmethus chiriquensis Loomis, 1964, Fieldiana: Zool., 47:126, figs. 13G-I. ♀ HT (FMNH) from Cerro Punta, Prov. Chiriquí, Panama.

Range: Also recorded from Cerro de la Muerte, Provs. San José-Cartago, Costa Rica (Loomis, 1974).

Desmethus setifer Chamberlin

Desmethus setifer Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 6, pl. 1, figs. 3-8. ♂ HT (USNM) from San Rafael, Guatemala (Dept. Guatemala or Dept. Jalapa: Loomis, MS, was unable to decide which of these two San Rafaels was the correct locality).

Genus **Platydesmus** Lucas

Platydesmus Lucas, 1843, Revue zool. Soc. cuvierienne, 6: 58; 1843, Ann. Soc. entom. France, (2) 1: 51. Type species: *P. polydesmoides* Lucas, by monotypy. – Pocock, 1903, Biol. Centr.-Amer., Diplop., p. 42.

Piestodesmus Lucas, 1849, Rev. & Mag. Zool., (2) 1: 598. Type species: *P. Moreletii* Lucas, by monotypy. Synonymized by DeSaussure & Humbert, 1872.

Rhaphonotum Loomis, 1968, Bull. U. S. Nat. Mus., 226: 108. Type species: *R. tuberculatum* Attems, 1951, by original designation. Synonymized by Hoffman, 1980.

28 species, northern Mexico (Nuevo León) to Panama.

Platydesmus analis Pocock

Platydesmus analis Pocock, 1903, Biol. Centr.-Amer., Diplop., p. 46, pl. IV, figs. 3, 3a-g. ST (BMNH) from Guatemala, without further locality (Pocock suspected the capital city might have been intended, rather than the country).

Platydesmus bitumulus Loomis

Platydesmus bitumulus Loomis, 1972, Florida Entom., 55: 204, figs. 34-37. ♀ HT (USNM) from Parismina, between Cairo and Guapiles, Prov. Limón, Costa Rica.

Platydesmus calus Chamberlin

Platydesmus calus Chamberlin, 1952, Great Basin Nat., 12: 30. HT (FMNH); Chamberlin cited material from Penuela and El Fortin de las Flores, Vera Cruz, Mexico, without stating from which the holotype derived.

Platydesmus cerrobius Chamberlin

Platydesmus cerrobius Chamberlin, 1942, Proc. Biol. Soc. Washington, 55: 57, fig. 1. ♂ HT (USNM) from Cerro Tancitaro, Michoacan.

Platydesmus corozoi Chamberlin

Platydesmus corozoi Chamberlin, 1943, Bull. Univ. Utah, 34(7): 10, fig. 1. HT/ST? (USNM) from Rio Frio, Distrito Federal, Mexico.

Chamberlin listed material from Rio Frio and Desierto de los Leones, D. F., and Rio Frio in Puebla. It is not known to me whether he selected a holotype from either of these three localities; the point should be investigated and a lectotype designated if necessary.

Platydesmus crucis Chamberlin

Platydesmus crucis Chamberlin, 1952, Great Basin Natur., 12: 31, fig. 1. HT/ST? (FMNH) from Las Vigas, Vera Cruz, Mexico.

Platydesmus excisus Chamberlin

Platydesmus excisus Chamberlin, 1952, Great Basin Natur., 12: 31, fig. 2. HT (FMNH) from Sierra Santa Elena, Dept. ?Quiche/Alta Verapaz, Guatemala.

Platydesmus guatemalae Brolemann

Platydesmus guatemalae Brolemann, 1900, Mém. Soc. Zool. France, 13: 112, figs. 78-82. HT/ST? (MNHP) from Guatemala, without further locality.

Platydesmus hirudo Pocock

Platydesmus hirudo Pocock, 1903, Biol. Centr.-Amer., Diplop., p. 46, pl. IV, figs. 2, 2a-e, pl. V, fig. 1. HT/ST? (BMNH) from Omilteme (Omiltemi), Guerrero, Mexico.

Platydesmus interruptus Chamberlin

Platydesmus interruptus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 5, pl. 1, figs. 1, 2. HT/ST? (USNM) from San Juan Pueblo and La Ceiba, Honduras. I do not know if Chamberlin specified a holotype from one of the localities.

Platydesmus lankesteri Brolemann

Platydesmus Lankesteri Brolemann, 1905, Ann. Soc. entom. France, 74: 354, text figs. IV, V, pl. 9, fig. 15. ♂♀ ST (MNHP) from "El Reventado", Prov. ?Guanacaste, Costa Rica.

Range: Recorded from several localities in El Salvador (Kraus, 1954). The lack of records for Guatemala and Nicaragua is therefore curious.

Platydesmus lineatus Pocock

Platydesmus lineatus Pocock, 1903, Biol. Centr.-Amer., Diplop., p. 46, pl. IV, figs. 5, 5a-g. HT/ST? (BMNH) from Volcán de Orizaba, Vera Cruz-Puebla, Mexico.

Platydesmus marmoreus Pocock

Platydesmus marmoreus Pocock, 1903, Biol. Centr.-Amer., Diplop., p. 46, pl. IV, figs. 3-3g. HT?ST (BMNH) from Cholhuitz, near San Mateo Ixtalán, Dept. Huehuetanango, Guatemala.

Range: Recorded from two departments in El Salvador by Kraus (1954).

Platydesmus melleus Loomis

Platydesmus melleus Loomis, 1968, Journ. Kansas Entom. Soc., 41: 393. ♂ HT (USNM) from Chipinque Mesa at Monterey, Nuevo León, Mexico.

Range: Also recorded from Horsetail Falls, ca. 35 km southeast of the type locality.

Platydesmus mesomelas Pocock

Platydesmus mesomelas Pocock, 1903, Biol. Centr.-Amer., Diplop., p. 46, pl. V, fig. 2. ♂♀ ST (BMNH) from Omilteme (Omiltemi), Guerrero, Mexico.

Platydesmus mexicanus Humbert & DeSaussure

Platydesmus mexicanus Humbert & DeSaussure, 1869, Rev. & Mag. Zool., 0: 156; DeSaussure & Humbert, 1872, Miss. Sci. Mexique, Zool., (6) 2: 103, pl. 2, figs. 5, 5a-e. ST (?MNHG) from "le Mexique; Cordillère orientale; Sierra de Agua." Selection of a lectotype seems mandated.

Platydesmus moreleti (Lucas)

Piestodesmus Moreleti Lucas. 1849, Rev. & Mag. Zool., (2) 1: 599, pl. 17, figs. 1-1d. F HT (MHNP?) from Tabasco, Mexico.

Platydesmus Moreleti: DeSaussure & Humbert, 1872, Miss. Sci. Mexique, Zool., (6) 2: 102.

Platydesmus nicaraguae Chamberlin

Platydesmus nicaraguae Chamberlin, 1956, Ent. News, 67: 158. HT (USNM) from Musawas, Waspuc River, ?Dept. Zelaya, Nicaragua.

Platydesmus nicaraguanus Chamberlin

Platydesmus nicaraguanus Chamberlin, 1925, Proc. Biol. Soc. Washington, 38: 37. HT/ST? (MCZ) from Nicaragua, without further locality.

Platydesmus perditus Chamberlin

Platydesmus perditus Chamberlin, 1952, Great Basin Natur., 12: 33, fig. 3. HT/ST? (FMNH) from "Guatemala" without further data.

Platydesmus perpictus Pocock

Platydesmus perpictus Pocock, 1903, Biol. Centr.-Amer., Diplop., p. 47, pl. 5, figs. 1-1f. ST (BMNH) from Senahú and Cholhuitz, Guatemala; it is not known if Pocock selected a holotype from either of these places. If not, a lectotype designation will fix the type locality.

Platydesmus polydesmoides Lucas

Platydesmus polydesmoides Lucas, 1843, Rev. zool. Soc. cuvier. 6: 58; Ann. Soc. entom. France, (2) 1: 52, pl. 3, figs. 1-8. HT/ST? (?MNHP) from Guatemala, without further locality.

Platydesmus reimoseri (Attems), new combination

Rhaphonotum reimoseri Attems, 1951, Mém. Mus. Nat. Hist. Natur., NS (A), 3: 201, figs. 13-22. HT/ST? (NMW) from Costa Rica, without further locality.

Platydesmus simplex Chamberlin, new status

Platydesmus interruptus simplex Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 5. HT/ST? (USNM) from La Ceiba, Dept. Atlantida, Honduras.

Platydesmus subovatus Loomis

Platydesmus subovatus Loomis, 1964, Fieldiana: Zool., 47: 127, figs. 13J-L. ♀ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panama.

Platydesmus taureus Loomis

Platydesmus taureus Loomis, 1964, Fieldiana: Zoology, 47: 128, figs. 13M-N. ♀ HT (FMNH) from Negra Creek, at Almirante, Prov. Bocas del Toro, Panama.

Platydesmus triangulifer Pocock

Platydesmus triangulifer Pocock, 1903, Biol. Centr.-Amer., Diplop., p. 45, pl. IV, figs. 4-4c. HT/ST? (BMNH) from Volcán de Acatenango =Volcán de Fuego?, Dept. Chimaltenango, Guatemala.

Range: Recorded also from Escobas, Dept. Izabal, Guatemala, perhaps misidentified.

Platydesmus tuberculosus (Attems),. new combination

Rhaphonotum tuberculosum Attems, 1951, Mém. Mus. Nat. Hist. nat., NS, (A), 3: 198, figs. 1-12. HT/ST? (NMW) from “Hamburg Farm”, west of Limón, Prov. Limón, Costa Rica.

Family Andrognathidae Cope

Andrognathidae Cope, 1869, Proc. American Philos. Soc., 11: 182. – Gardner, 1975, Mem. Pacific Coast Entom. Soc., 5: 1 et seq. (revision of Nearctic fauna). – Hoffman, 1980, Classification of the Diplopoda, p. 118 (list of genera).

Five genera, North America; three, Europe; four, eastern Asia.

Owing to the unsatisfactory condition of the existing classification, I prefer to omit subfamily categories and merely list the genera alphabetically. Gardner's careful monograph (1975) should be consulted for detailed descriptions, literature references, and distributional data.

Genus **Andrognathus** Cope

Andrognathus Cope, 1869, Proc. American Philos. Soc., 11: 182. Type species: *A. corticarius* Cope, by monotypy. – Gardner, 1975, Mem. Pacific Coast Entom. Soc., 5: 15.

One species, southeastern United States.

Andrognathus corticarius Cope

Andrognathus corticarius Cope, 1869, Proc. American Philos. Soc., 11: 182. Type material not known to exist, from Montgomery Co., Virginia (probably at Yellow Sulphur Springs, near Ellett). – Gardner, 1975, Mem. Pacific Coast Entom. Soc. 5: 15, figs. 1, 5-7.

Range: southeastern United States, from central North Carolina and southwest Virginia to Alabama and western Florida.

Genus **Brachycybe** Wood

Brachycybe Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia [16] : 187. Type species: *B. Lecontii* Wood, by monotypy. – Cook & Loomis, 1928, Proc. U. S. Nat. Mus., 72(18): 22. – Gardner, 1975, Mem. Pacific Coast Entom. Soc., 5: 19.

Six species, North America; one, Japan.

Brachycybe californica (Karsch), new combination

Platydesmus californicus Karsch, 1880, Mitt. Münchner Entom. Ver., 4: 144. HT (ZMB) labeled only "California."

The existence of Karsch's holotype was unknown to Gardner; he therefore followed the precedent of Cook & Loomis (1928) in arbitrarily considering it to be a junior synonym of *B. rosea* Murray. I believe that this species must be regarded as valid until the type can be examined; it may prove to be the same as *producta.*

The name was *californicus* was previously synonymized with *lecontii* by Bollman (1893).

Brachycybe lecontii Wood

Brachycybe Lecontii Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, [16]: 187. ST (USNM) from Georgia, without further locality.

Platydesmus lecontei: Bollman, 1888, Entom. Americana, 4: 1.

Brachycybe lecontei: Cook & Loomis, 1928, Proc. U. S. Nat. Mus., 72(18): 24.

Brachycybe lecontii: Gardner, 1975, Mem. Pacific Coast Ent. Soc.. 5: 32, figs. 1, 2, 27-30.

Range: Southeastern United States, from Virginia to Illinois and Kansas, south to Louisiana and southern Alabama (map, Gardner, 1975, fig. 2).

Brachycybe petasata Loomis

Brachycybe petasata Loomis, 1936, Proc. U. S. Nat. Mus., 83: 365, figs. 32d,e. ♂ HT (USNM) from "Cherokee National Forest, Tennessee". – Gardner, 1975, Mem. Pacific Coast Entom. Soc., 5: 37, figs. 1, 3, 35-38.

Range: Southern Appalachians, in adjacent parts of North Carolina, Georgia, Alabama, and Tennessee, possibly also in Virginia and Kentucky (map, Gardner, 1975, fig. 3).

Brachycybe picta Gardner

Brachycybe picta Gardner, 1975, Mem. Pacific Coast Entom. Soc., 5: 26, figs. 1, 4, 18-21. ♀ HT (UCD) from one mile north of Mendocino, Mendocino Co., California.

Range: Known also from Paradise Valley, Marin Co., California. Both known localities are immediately adjacent to the Pacific coast.

Brachycybe producta Loomis

Brachycybe producta Loomis, 1936, Proc. U. S. Nat. Mus. 83: 367, figs. 32h, i. ♂ HT (USNM) from an unknown locality, thought to have been in Baja California Norte, Mexico. – Gardner, 1975, Mem. Pacific Coast Entom. Soc., 5: 22, figs. 1, 4, 14-17.

Brachycybe tuolumna Chamberlin, 1953, Proc. Biol. Soc. Washington, 66: 70. ♀ HT (USNM) from Windeler Cavern, Tuolumne Co., California. Synonymized by Gardner, 1975.

Range: California: Sierra Nevada range from Mariposa Co. north to Shasta Co., Coast Range from San Francisco Bay north to Lake Co. (map, Gardner, 1975, fig. 4).

Brachycybe rosea Murray

Brachycybe rosea Murray, 1877, Economic Entomology (Science handbook, South Kensington Museum, London), p. 21. Existence of type material unknown, from California, without further locality. – Cook & Loomis, 1928, Proc. U. S. Nat. Mus. 72(18): 24. – Gardner, 1975, Mem. Pacific Coast Entom. Soc., 5: 28, figs. 1, 4, 22-25.

Brachycybe potterinus Chamberlin, 1941, Bull. Univ. Utah, 31(11): 4. ♂ HT (USNM) from "Potter Creek, near Potters Cave", California; misplaced in Mendocino Co. in the 1958 "Checklist.". This locality is actually at Lake Shasta, Shasta Co., as explained by Gardner, 1975: 32. Synonymized by Gardner, 1975.

Range: Sierra Nevada range in northern California, recorded from El Dorado, Nevada, Plumas, and Shasta counties.

The original material described by Murray (as well as the other millipeds he named in 1877) was part of the public exhibition displays in the Bethel Green museum, London. There is no record that any of it was ever transferred to the Natural History Museum, and all must be considered as lost through inadvertancy or deliberate discard. Under the circumstances, the arbitrary association of the name *rosea* with a Californian species by Cook & Loomis, 1928, and by Gardner, 1975, is probably the most reasonable disposition of the name. I do not, however, follow these authors in combining Karsch's *P. californicus* as a junior synonym until the extant type specimen at Berlin is restudied.

Genus **Gosodesmus** Chamberlin

Gosodesmus Chamberlin, 1922, Pomona College Journ. Entom. Zool., 14: 9. Type species: *G. claremontus* Chamberlin, by original designation. – Buckett & Gardner, 1969, Journ. New York Entom. Soc., 77: 40.

Eucybe Chamberlin, 1941, Bull. Univ. Utah, 31(11): 3. Type species: *E. clarus* Chamberlin, by original designation. Synonymized by Buckett & Gardner, 1969.

Stenocybe Chamberlin, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 68: 3. Type species: *S. waipea* Chamberlin, by original designation. Synonymized by Gardner, 1975.

Monotypic, California.

Gosodesmus claremontus Chamberlin

Gosodesmus claremontus Chamberlin, 1922, Pomona College Journ. Entom. Zool., 14: 9, 3 figs. HT (MCZ) from Claremont, Los Angeles Co., California. – Buckett & Gardner, 1969, Journ. New York Entom. Soc., 77: 40. – Gardner, 1975, Mem. Pacific Coast Entom. Soc., 5: 39, figs. 1, 39-42.

*Eucybe clarus*Chamberlin, 1941, Bull. Univ. Utah, 31(11): 3. HT (USNM) from Hastings Reservation, Monterey Co., California. Synonymized by Buckett & Gardner, 1969.

Eucybe longior Chamberlin, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 68: 4. HT (USNM) from 12 miles east of Lemoncove, Tulare Co., California. Synonymized by Buckett & Gardner, 1969.

Eucybe auctus Chamberlin, 1954, Proc. Biol. Soc. Washington, 67: 233. ♂ HT (USNM) from Chowchilla Mountain, northeast of Signal Peak, Mariposa Co., California. Synonymized by Buckett & Gardner, 1969.

Stenocybe waipea Chamberlin, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 68: 3. HT (USNM) from Squaw Creek, Placer Co., California. Synonymized by Gardner, 1975.

Range: Most of the mountainous areas of California, except the desert southeastern counties (map, Buckett & Gardner, 1969, fig. 2).

Entries for *Stenocybe, S. waipea,* and *Eucybe auctus* were inexplicably omitted from the 1958 "Checklist".

Genus **Ischnocybe** Cook & Loomis

Ischnocybe Cook & Loomis, 1928, Proc. U. S. Nat. Mus. 72(18): 21. Type species: *I. plicata* Cook & Loomis, by original designation.

Monotypic, California, Oregon, Idaho.

Ischnocybe plicata Cook & Loomis

Ischnocybe plicata Cook & Loomis, 1928, Proc. U. S. Nat. Mus., 72(18): 22, fig. 6. HT (USNM) from 21 miles up North Fork Feather River from Belden, Plumas Co., California. – Gardner, 1975, Mem. Pacific Coast Entom. Soc., 5: 44, figs. 1, 43-46.

Genus **Mitocybe** Cook & Loomis

Mitocybe Cook & Loomis, 1928, Proc. U. S. Nat. Mus., 72(18): 18. Type species: *M. auriportae* Cook & Loomis, by original designation.

Monotypic, California.

Mitocybe auriportae Cook & Loomis

Mitocybe auriportae Cook & Loomis, 1928, Proc. U. S. Nat. Mus., 72(18): 20, figs. 5a, b. HT (USNM) from Mount Tamalpais, Marin Co., California. – Gardner, 1975, Mem. Pacific Coast Entom. Soc., 5: 18, figs. 1, 8-11.

Order Siphonophorida

Family Siphonophoridae Newport

Siphonophoridae Newport, 1844, Proc. Linnean Soc. London, 1: 195. – Hoffman, 1980, Classification of the Diplopoda, p. 116. - Shelley, 1996, Journ. Nat. Hist., 30: 1805 (New World species listed).

Californizoniinae Verhoeff, 1941, Zool. Anz., 134: 220. Synonymized by Hoffman, 1980.

Number of genera unknown. Southwestern United States to Argentina; West Indies; southeast Asia; East Indies; Australia.

The definition of genera in this family, never satisfactory from the beginning, was greatly complicated by Verhoeff's proposal of many new, mostly monotypic, generic names based mostly on published accounts only, and by the addition ten years later of several more such names by Graf Attems (1951).Verhoeff's treatment was criticized in considerable detail by Carl (1944), in a paper apparently unknown to Attems who belaboured Verhoeff's work with independent but equal diligence. Regrettably the "revision" by Attems, obviously written very late in his career under difficult conditions, was just as bad in its own way.

Traditionally the species of tropical America have been divided between the genera *Siphonophora* and *Siphonocybe*, depending on presence or absence of noticeable metazonal paranota.This dichotomy has generally been informally acknowledged as artificial but maintained for lack of a better arrangement.The nominal genera set up by Verhoeff were based mostly on trivial gonopodal characters noted in published drawings by Carl and Chamberlin; Carl himself exposed some of the inevitable fallacies in this approach.

Many genera proposed by both Verhoeff and Attems were based on the number of visible podomeres in the male gonopods, some thus united species from remote parts of the world.This seems to me a prime case of reductional homoplasy, which should guide the work of future revisers.

These taxa were awarded provisional generic status by Shelley (1997).On the one hand this keeps them conspicuous for later revision, on the other it carries a sort of endorsement by fiat.I prefera more Napoleonic position and synonymize nearly all of them under *Siphonophora* as guilty until proven innocent.I admit to a degree of inconsistent partiality in retaining *Siphonocybe* and *Siphonacme* as valid; their age imparts degree of security in possible future synonymizations.

Genus **Siphonacme** Cook & Loomis

Siphonacme Cook & Loomis, 1928, Proc. U. S. Nat. Mus., 72: 7. Type species, *S. lyttoni* Cook & Loomis, by original designation. – Shelley, 1996, Myriapodologica, 4: 25.

Californizonium Verhoeff, 1941, Zool. Anz., 115: 217. Type species: *Siphonophora pseustes* Chamberlin, 1923, by monotypy. Synonymized by Shelley, 1996.

Two species: Arizona and Sonora (map, Shelley, 1996, fig. 14).

Siphonacme lyttoni Cook & Loomis

Siphonacme lyttoni Cook & Loomis, 1928, Proc. U. S. Nat. Mus., 72: 8, figs. 1a-c, pl. 2, three unnumbered figures on right. ♂ HT (USNM) from a site between Superior and Miami, two km north of the Gila/Pinal county line, Arizona. – Shelley, 1996, Myriapodologica, 4: 27, figs. 4-6.

Siphonacme pseustes (Chamberlin)

Siphonophora pseustes Chamberlin, 1923, Proc. California Acad. Sci., (4) 12: 400, figs.. 30-33. ♂ HT (CAS) from San Pedro Bay, ca. 35 km northwest of Guaymas, Sonora, Mexico.

Siphonacme pseustes: Cook & Loomis, 1928, Proc. U. S. Nat. Mus., 72(18): 10. – Shelley, 1996, Myriapodologica, 4: 27, fig. 7.

Californizonium pseustes: Verhoeff, 1941, Zool. Anz., 115: 217.

Genus **Siphonocybe** Pocock

Siphonocybe Pocock, 1903, Biol. Centr. Amer., Diplopoda, p. 50. Type species: *Siphonorhinus hartii* Pocock, 1894, by original designation. – Loomis, 1975, Florida Entom., 58: 183 (key to five species).

Five species, West Indies (Haiti, Jamaica), Panama, northern South America.

Siphonocybe alba Loomis

Siphonocybe alba Loomis, 1936, Bull. Mus. Comp. Zool., 80: 13, figs. 3a-c. ♂ HT (USNM) from a site "near Trouin", Haiti.

Range: Also recorded from a site between Leogane and Petit Goave, Haiti.

Siphonocybe crassirostrata Loomis

Siphonocybe crassirostrata Loomis, 1975, Florida Entom., 58: 183, figs. 23, 24. ♂ HT (FSCA) from Mount Diablo, south of Moneague, St. Ann Par., Jamaica.

Range: Recorded from one mile south of Claremont, St. Ann Par., Jamaica.

Siphonocybe laticollis Loomis

Siphonocybe laticollis Loomis, 1964, Fieldiana: Zool. 47: 123, figs. 12, L-N. ♂ HT (FMNH) from Finca Lerida, near Boquete, Prov. Chiriquí, Panama.

Range: Recorded from Cerro Punta, Prov. Chiriquí, Panama.

Siphonocybe pilosa Loomis

Siphonocybe pilosa Loomis, 1961, Proc. U. S. Nat. Mus., 113: 118, figs. 7 i-m. ♂ HT (USNM) from Fort Sherman, Canal Zone, Panama.

Genus **Siphonophora** Brandt

Siphonophora Brandt, 1837, Bull. Scientif. Acad. Imp. Sci. St. Petersbourg, 1: 179. Type species: *S. portoricensis* Brandt, by monotypy. – Shelley, 1996, Journ. Nat. Hist., 30: 1799 (catalog New World species).

Guatemalium Verhoeff, 1941, Zool. Anz., 134: 217. Type species: *Siphonophora barberi* Chamberlin, 1922, by original designation. – Shelley, 1996, Journ. Nat. Hist., 30: 1811.

Yukatanium Verhoeff, 1941, Zool. Anz., 134: 217. Type species: *Siphonophora sabachana* Chamberlin, 1938, by original designation. – Shelley, 1996, Journ. Nat. Hist., 30: 1811.

Linozonium Attems, 1951, Mém. Mus. Nat. Hist. Natur., (A) 3: 225. Type species: *Siphonophora mexicana* DeSaussure & Humbert, 1872, by original designation.

About 70 nominal species, New and Old World tropics (except Africa), a few extending into temperate parts of the United States and Argentina.

Loomis (1970) provided a key to the West Indian species of this genus.

Siphonophora albiceps Loomis

Siphonophora albiceps Loomis, 1970, Florida Entom., 53: 134, figs. 4, 5. ♂ HT (USNM) from Cinnamon Bay Trail, St. John, U. S. Virgin Islands.

Siphonophora alveata Loomis

Siphonophora alveata Loomis, 1972, Florida Entom., 55: 205, figs. 38, 39. ♂ HT (USNM) from Cairo, Prov. Limón, Costa Rica.

Siphonophora aviceps Loomis

Siphonophora aviceps Loomis, 1961, Proc. U. S. Nat. Mus., 113: 119, figs. 8c-f. ♂ HT (USNM) from Barro Colorado Island, Canal Zone, Panama.

Range: Recorded from localities in Panama and Chiriqui provs., in addition to the Canal Zone.

Siphonophora barberi Chamberlin

Siphonophora barberi Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 7, pl. 2, figs. 1-5. ♂ HT (USNM) from Jocalo, Departamento not located, Guatemala.

Guatemalium barberi: Verhoeff, 1941, Zool. Anz., 134: 217. – Shelley, 1996, Journ. Nat. Hist., 30: 1811.

Siphonophora brevicornis Pocock

Siphonophora brevicornis Pocock, 1903, Biol. Centr.-Amer., Diplopoda, p. 50, pl. V, figs. 5, 5a. ST (BMNH) from Volcán de Agua, Dept. Sacatepequez, Guatemala.

Siphonophora coclensis Loomis

Siphonophora coclensis Loomis, 1964, Fieldiana: Zool. 47: 124, figs 12 O-P. ♂ HT (FMNH) from "trail to Las Minas", El Valle, Prov. Cocle, Panama.

Siphonophora compacta Loomis

Siphonophora compacta Loomis, 1975, Florida Entom., 58: 184, figs. 25, 26. ♂ HT (FSCA) from Mount Diablo, south of Moneague, St. Ann Par., Jamaica.

Siphonophora conicornis Chamberlin

Siphonophora conicornis Chamberlin, 1952, Great Basin Natur., 12: 34. F HT (FMNH) from Escobas, Dep. Izabal, Guatemala.

Siphonophora cornuta Pocock

Siphonophora cornuta Pocock, 1903, Biol. Centr.-Amer., Diplopoda, p. 50, pl. V, figs. 4, 4a. ST (BMNH) from Volcán de Acatenango, Dept. ?Chimaltenango, Guatemala.

Siphonophora costaricae Chamberlin

Siphonophora costaricae Chamberlin, 1914, Trans. American Entom. Soc., 40: 186. ♀ HT (ANSP?) From Juan Vinas, Prov. Cartago, Costa Rica.

Siphonophora valerii Chamberlin, 1933, Pan-Pacific Entom., 9: 24, figs. 2-4. ♀ HT (USNM) from Pavas, Prov. Cartago, Costa Rica. Synonymized by Loomis, 1972.

Siphonophora cubana Karsch

Siphonophora cubana Karsch, 1880, Mitt. Münchner Entom. Verein, 4: 144. 4 ST (ZMB) labeled only "Cuba."

Siphonophora fallens Chamberlin

Siphonophora fallens Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 8, pl. 3, figs. 1-4. ♂ HT (USNM) from a site between Joyabaj and [Santa Cruz de] Quiché, Dept. Quiché, Guatemala.

Siphonophora fallens annecta Chamberlin, 1952, Great Basin Natur., 12: 34. ♀ HT (FMNH) from Volcan Tajumulco, Dept. San Marcos, Guatemala.

Siphonophora filiformis Mauriès

Siphonophora filiformis Mauriès, 1980, Bull. Mus. nat. Hist. natur., (4), Zool., 2: 1103. ♂ HT (MNHP) from Saint-Claude, Basse-Terre, Guadeloupe.

Siphonophora globiceps Pocock

Siphonophora globiceps Pocock, 1903, Biol. Centr.-Amer., Diplop., p. 41, pl. 5, figs. 6-6a. HT (BMNH) from Purulhá, Dept. Baja Verapaz, Guatemala.

Range: Also reported from Chichivac, Dept. Chimaltenango, Guatemala.

Siphonophora gracilior Chamberlin

Siphonophora gracilior Chamberlin, 1918, Bull. Mus. Comp. Zool. 62: 173. HT (MCZ) from Petionville, Haiti.

Siphonophora hoffmani Santiago-Blay & Poinar

Siphonophora hoffmani Santiago-Blay & Poinar, 1992, Ann. Entom. Soc. America, 85: 367, figs. 18-20. ♂ HT (Poinar Colln., Univ. Calif. Berkeley), from amber of Upper Eocene age believed to have been mined in the Cordillera Septentrional, Republica Dominicana.

Siphonophora limitare Loomis

Siphonophora limitare Loomis, 1936, Proc. U. S. Nat. Mus., 83: 362, figs. 32a, b. ♂ HT (USNM) from Brownsville, Cameron Co., Texas.

Range: Recorded from Cameron and Kendall counties, Texas (map, Shelley, 1997, fig. 14).

Siphonophora manni Chamberlin

Siphonophora manni Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 173. HT (MCZ) from Grande Riviere, Haiti.

Siphonophora montana Loomis

Siphonophora montana Loomis, 1964, Fieldiana: Zool., 47:125, figs. 13A-D. ♂ HT (FMNH) from Cerro Punta, Prov. Chiriquí, Panama.

Siphonophora panamensis Loomis

Siphonophora panamensis Loomis, 1961, Proc. U. S. Nat. Mus., 113: 121, figs. 8g-j. ♂ HT (USNM) from Piña, Canal Zone, Panama.

Range: Recorded from several localities in the Canal Zone and Panama and Cocle provs.

Siphonophora parvula Loomis

Siphonophora parvula Loomis, 1964, Fieldiana: Zool., 47: 125, figs. 13E-F. ♂ HT (FMNH) from "Barca area" at Finca Lerida near Boquete, Prov. Chiriquí, Panama.

Siphonophora platops Loomis

Siphopnophora platops Loomis, 1941, Bull. Mus. Comp. Zool., 88: 19, figs. 2a-c. ♂ HT (MCZ) from rain forest near Valle Nuevo, 6,000 ft., Cordillera Central, Republica Dominicana.

Siphonophora portoricensis Brandt

Siphonophora portoricensis Brandt, 1837, Bull. scientif. Acad. Imp. sci. St.-Petersbourg, 5: 179. 2 ST (ZMB) from "Porto Rico" without further data. – Shelley, 1996, Journ. Nat. Hist., 30: 1800, figs. 1-12 (description and figures of male lectotype).

Range: Known from several localities in north, central, and eastern Puerto Rico (map, Shelley, 1996).

Siphonophora progressor Chamberlin

Siphonophora progressor Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 9, pl. 3, figs. 5-7, pl. 4, figs. 1, 2. HT (USNM) from Progresso, Prov. Yoro, Honduras.

Siphonophora proxima Chamberlin

Siphonophora proxima Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 173. HT (MCZ) from an unspecified locality in Haiti.

Siphonophora robusta Chamberlin

Siphonophora robusta Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 174. HT (MCZ) from "Liguanea Plain" (now a part of Kingston), St. Andrew Par., Jamaica.

Siphonophora rosacea Loomis

Siphonophora rosacea Loomis, 1972, Florida Entom., 55: 206, figs. 41, 42. ♂ HT (USNM) from Cairo, Prov. Limón, Costa Rica.

Siphonophora sabachana Chamberlin

Siphonophora sabachana Chamberlin, 1938, Publ. Carnegie Inst. Washington, 491: 166, figs. 1-5. ♂ HT (USNM) from Sabacha Cave, Tekax, Yucatan, Mexico.

Siphonophora senaria Loomis

Siphonophora senaria Loomis, 1937, Bull. Mus. Comp. Zool., 80: 217, figs. 1, 2. 0 HT (MCZ) from "Soledad", Prov. Cienfuegos, Cuba.

Siphonophora telana Chamberlin

Siphonophora telana Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 7, pl. 2, figs. 6-8. F HT (USNM) from Tela, Prov. Atlantida, Honduras.

Siphonophora tenuicornis Pocock

Siphonophora tenuicornis Pocock, 1894, Journ. Linnean Soc. London, 24: 479, fig. 4. HT (BMNH) from St. Vincent, Lesser Antilles.

Siphonophora texascolens Chamberlin & Mulaik

Siphonophora texascolens Chamberlin & Mulaik, 1941, Journ. New York Entom. Soc., 49: 64. ♂ HT (USNM) from Raven Ranch [ca. 12 miles south of Kerrville], Kerr Co., Texas. – Shelley, 1996, Myriapodologica, 4: 30, figs. 11-13.

Siphonophora trifini Kraus

Siphonophora trifini Kraus, 1954, Senckenb. biol. 35: 343, figs. 91-97. ♂ HT (SMF) from rainforest, Monte Cristo, 2200 m., Metapan Mountains, Dept. Santa Ana, El Salvador.

Siphonophora velezi Santiago-Blay & Poinar

Siphonophora velezi Santiago-Blay & Poinar, 1992, Ann. Entom. Soc. America, 85: 368, fig. 21. ♂ HT (Poinar Colln, Univ. Calif. Berkeley) from amber of Upper Eocene age, believed to have been mined in the Cordillera Septentrional, Republica Dominicana.

Siphonophora vera Chamberlin

Siphonophora vera Chamberlin, 1952, Great Basin Natur., 12: 34. ST (FMNH) from La Vigas, Veracruz, Mexico.

Family Siphonorhinidae Cook

Siphonorhinidae Cook, 1895, Ann. New York Acad. Sci., 9: 2. – Hoffman, 1980, Classification of the Diplopoda, p. 116.

Indiozoninae Verhoeff, 1941, Zool. Anz., 134: 220.

Teratognathidae Attems, 1951, Mém. Mus. nat. Hist. natur., Paris, (n.s. A), 3: 210.

Five nominal genera, four confined to the Indoaustralian region, one in California.

Genus **Illacme** Cook & Loomis

Illacme Cook & Loomis, 1928, Proc. U. S. Nat. Mus., 72(18): 10. Type species: *I. plenipes* Cook & Loomis, by original designation.

One species, California.

Illacme plenipes Cook & Loomis

Illacme plenipes Cook & Loomis, 1928, Proc. U. S. Nat. Mus. 72(18): 12. HT (USNM) from a site between Salinas and San Juan Bautista, San Benito Co., California.

Order Callipodida Bollman

Investigations of this order by Dr. R. M. Shelley (1979, 1984, 1989, 1996) have brought our knowledge of the Nearctic fauna up to a very satisfactory level, although some additional new Mexican taxa may be expected. It is therefore a matter of considerable regret that no efforts have been made, since my last expression of the same regret in 1980, to integrate the suprageneric taxa now established for North America, southern Europe, and southeast Asia. It must be emphasized, e. g., that inclusion of the several Nearctic subfamilies within the European Schizopetalidae is almost certainly indefensible, and was at best a stopgap measure even when proposed in 1980.

Family Abacionidae Shelley, new status

Abacioninae Shelley, 1979, Proc. Biol. Soc. Washington, 92: 535. – Hoffman, 1980, Classification of the Diplopoda, p. 122.

Tribe Abacionini Shelley

Abacionini Shelley, 1979, Proc. Biol. Soc. Washington, 92: 535.

Two genera, eastern United States.

Genus **Abacion** Rafinesque

Abacion Rafinesque, 1820, Annals of Nature, 1st Annual Number for 1820, p. 9. Type species: *A. tesselatum* Rafinesque, by monotypy. – Hoffman & Crabill, 1953, Florida Entom., 36: 81.– Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 108.– Shelley, 1984, Canadian Journ. Zool., 62: 981 (revision).

Spirostrephon Brandt, 1841, Bull. Sci. Acad. Sci. Saint-Petersbourg, 8: 105. Type species: *Julus lactarius* Say, 1821, by monotypy. – Loomis, 1937, Proc. U. S. Nat. Mus., 84: 105. Synonymized by Hoffman & Crabill, 1953.

Reasia Gray, 1843, The Cyclopaedia of Anatomy and Physiology, 3: 546. Type species: *Reasia spinosa* Sager, 1856, by subsequent monotypy. Synonymized by Chamberlin & Hoffman, 1958.

Platops Newport, 1844, Ann. Mag. Nat. Hist., 13: 267. Type species: *P. rugulosa* Newport, by subsequent designation of Cook, 1895. Synonymized with *Spirostrephon* by Cook, 1895.

Four species, United States east of the 100th Meridian; northern Mexico.

Abacion lactarium (Say)

Julus lactarius Say, 1821, Journ. Acad. Nat. Sci. Philadelphia, 2: 104. Type material, from an unspecified locality, not known to be extant. Chamberlin & Hoffman (1958: 109) suggested Philadelphia, Pennsylvania, as restricted type locality, but without designating a neotype.

Spirostrephon lactarium: Brandt, 1841. Bull. Sci. Acad. Sci. Saint-Petersbourg, 8: 105. – Loomis, 1937, Proc. U. S. Nat. Mus., 84: 108, figs. 16, l-m.

Platops lineata Newport, 1844, Ann. & Mag. Nat. Hist., 13: 267. HT (BMNH) from "North America".

Abacion lactarium: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 109. – Shelley, 1984, Canadian Journ. Zool., 62: 983, figs. 4-6..

Range: New Jersey to central Florida, west and north to Ohio and Indiana (map, Shelley, 1984, fig. 12), with an apparent hiatus in the range between Virginia and northern Florida. Although the species is statewide in Florida, there are no Coastal Plain records for the northern population.

Abacion magnum (Loomis)

Spirostrephon magnum Loomis, 1943, Bull. Mus. Comp. Zool., 92: 388, figs. 8 a-b. ♂ HT (MCZ) from Monte Sano State Park, Madison Co., Alabama.

Spirostrephon highlandense Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., 66: 17, figs. 5, 6. ♂ HT (USNM) from Highlands, Macon Co., North Carolina. Synonymized by Shelley, 1984..

Abacion magnum: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 110.– Shelley, 1984, Canadian Journ. Zool., 62: 984, figs. 7-9.

Range: Appalachian mountain system and adjacent lowlands: central Alabama to central western New York; Piedmont of North and South Carolina, and Coastal Plain of the latter (map, Shelley, 1984, fig. 12).

Abacion tesselatum Rafinesque

Abacion tesselatum Rafinesque, 1820, Annals of Nature, p. 9. Type material not extant, from "...the knobby hills of Estill county in Kentucky, under stones..." – Hoffman & Crabill, 1953, Florida Entom., 36: 81. – Shelley, 1984, Canadian Journ. Zool., 62: 982, figs. 1-3.

Platops rugulosa Newport, 1844, Ann. & Mag. Nat. Hist., 13: 267. ♂ HT (BMNH) from an unspecified locality. Synonymized with *tesselatum* by Chamberlin & Hoffman, 1958.

Reasia spinosa Sager, 1856, Proc. Acad. Nat. Sci. Philadelphia, p. 100. Type material not known to exist, from an unspecified locality, vicinity of Detroit, Michigan suggested as type locality by Chamberlin & Hoffman, 1958.

Lysiopetalum eudasym McNeill, 1887, Proc. U. S. Nat. Mus., 10: 330. HT (USNM) from Bloomington, Monroe Co., Indiana. Synonymized with *tesselatum* by Chamberlin & Hoffman, 1958.

Spirostrephon creolum Chamberlin, 1942, Bull. Univ. Utah, 32(8): 9, figs. 24, 25. ♂ HT (USNM) from Covington, St. Tammany Par., Louisiana. Synonymized by Shelley, 1984.

Abacion tesselatum creolum: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 110.

Range: Southcentral United States, western Pennsylvania to Michigan, Wisconsin, Kansas, southward to the Florida panhandle and Louisiana, also central Appalachians eastward to Virginia (Map, Shelley, 1984, fig. 12).

Abacion texensis (Loomis)

Spirostrephon texensis Loomis, 1937, Proc. U. S. Nat. Mus., 84: 109, fig. 16n. ♂ HT (USNM) from Pierce, Wharton Co., Texas.

Spirostrephon jonesi Chamberlin, 1942, Canadian Entom., 74: 17, fig. 1. ♂ HT (USNM) from Ames, Story Co., Iowa. Synonymized by Chamberlin & Hoffman, 1958.

Tynomma messicanum Chamberlin, 1943, Bull. Univ. Utah, 34(7): 33. ♀ HT (USNM) from Chipinque [Mesa], Monterey, Nuevo León, Mexico. Synonymized by Loomis, 1968.

Abacion texense: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 110. – Shelley, 1984, Canadian Journ. Zool., 62:

Range: Great Plains from Minnesota and eastern Nebraska south to northern Nuevo León, eastward as far as southern Mississippi, doubtlkess also in Alabama and Tennessee (map, Shelley, 1984, fig. 12).

Genus **Tetracion** Hoffman

Tetracion Hoffman, 1956, Alabama Geol. Surv., Mus. Pap. 35: 5. Type species: *T. jonesi* Hoffman, by original designation.

Three species, caves in Tennessee, Alabama, Georgia.

Tetracion antraeum Hoffman

Tetracion jonesi antraeum Hoffman, 1956, Alabama Geol. Surv. Mus. Pap. 35: 8, figs. 6-8. 0 HT (Alabama Geol. Surv.) from Barclay Cave, Madison Co., Alabama.

Tetracion antraeum: Shelley, 1996, Entom. Scandinavica, 27: 63.

Range: Caves in Jackson and Madison cos., Alabama.

Tetracion jonesi Hoffman

Tetracion jonesi jonesi Hoffman, 1956, Alabama Geol. Surv. Mus. Pap. 35: 6, figs. 1-5. 0 HT (Geol. Surv. Alabama) from Bat Cave, near Grant, Marshall Co., Alabama.

Tetracion jonesi Shelley, 1996, Entom. Scandinavica, 27: 63.

Range: Caves in Jackson and Marshall counties, Alabama.

Tetracion tennesseensis Causey

Tetracion tennesseensis Causey, 1959, Journ. Tennessee Acad. Sci., 34: 236, fig. 6. ♂ HT (AMNH) from Cumberland Caverns, Warren Co., Tennessee.

Range: Caves in Warren and Grundy cos., Tennessee.

Tribe Delophonini Shelley

Tribe Delophonini Shelley, 1979, Proc. Biol. Soc. Washington, 92: 535.

One genus, southeastern United States.

Genus **Delophon** Chamberlin

Delophon Chamberlin, 1943, Bull. Univ. Utah, 34(6): 13.. Type species: *D. georgianum* Chamberlin, by original designation. – Shelley, 1979, Proc. Biol. Soc. Washington, 92: 535 (revision).

Four species, southeastern United States.

Delophon georgianum Chamberlin

Delophon georgianum Chamberlin, 1943, Bull. Univ. Utah, 34(6): 13, figs. 28-30. ♂ HT (USNM) from Gainesville, Hall Co., Georgia. – Shelley, 1979, Proc. Biol. Soc. Washington, 92: 537, figs. 1-3.

Delophon carolinum Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., 66: 18, fig. 5. ♂ HT (USNM) from Highlands, Macon Co., North Carolina. Synonymized by Shelley, 1979.

Range: Southern Blue Ridge in northeastern Georgia, western North Carolina, and eastern Tennessee, an isolated population in the western Piedmont in North Carolina (map, Shelley, 1979, fig. 10).

Delophon holti Shelley

Delophon holti Shelley, 1979, Proc. Biol. Soc. Washington, 92: 544, figs. 7-9. ♂ HT (VMNH) from a sinkhole about one mile southeast of Russelville, Hamblin Co., Tennessee.

Range: This localized species remains known only from the type collection, but almost surely occurs in similar habitats in eastern Tennessee and adjacent southwest Virginia.

Delophon mississippianum Shelley

Delophon mississippianum Shelley, 1983, Ent. News, 94: 11, figs. 1-3. ♂ HT (USNM) from deciduous woods one mile southeast of Ecru, Pontotoc Co., Mississippi.

Delophon serrulatum Causey

Delophon serrulatum Causey, 1954, Tulane Stud. Zool. 2: 64, figs. 1-3. ♂ HT (AMNH) from vicinity of Loxley, Baldwin Co., Alabama. – Shelley, 1979, Proc. Biol. Soc. Washington, 92: 543, figs. 4-6.

Range: Northcentral Tennessee (Fentress Co.) and northwest Georgia south through Alabama to vicinity of Mobile Bay (map, Shelley, 1979, fig. 10). This species almost surely occurs in southern Kentucky, northeast Mississippi, and the Florida panhandle..

Family Schizopetalidae Verhoeff

Schizopetalinae Verhoeff, 1909, Sitzungb. Ges. naturf. Freunde Berlin for 1909: 213.

Schizopetalidae: Hoffman & Lohmander, 1964,. Mitt. Zool. Mus. Inst. Hamburg, 62: 112, 123.

Four subfamilies, two of them occurring in western North America.

Subfamily Tynommatinae Hoffman

Tynommatinae Hoffman, 1980, Classification of the Diplopoda, p. 120, 122. – Shelley, 1996, Entom. Scandinavica, 27: 25 et seq. (Revision).

Three tribes, southwestern United States, Mexico.

Tribe Colactidini Hoffman

Colactidini Hoffman, 1980, Classification of the Diplopoda, p.121. – Shelley, 1996, Entom. Scandinavica, 27: 30.

Three genera, California to New Mexico, south through western Mexico to southern Sinaloa.

Genus **Colactis** Loomis

Colactis Loomis, 1937, Proc. U. S. Nat. Mus., 84: 120. Type species: *C. saxetana* Loomis, by original designation.

Four species, southern Utah and Nevada to Sinaloa and Baja California Norte.

Colactis protenta Loomis

Colactis protenta Loomis, 1937, Proc. U. S. Nat. Mus., 84: 126, figs. 16g-i, pl. 3, fig. 3. ♂ HT (USNM) from a site along Hy. 1, 15 miles north of Ensenada, Baja California Norte, Mexico. – Shelley, 1996, Entom. Scandinavica, 27: 32, figs. 5-8.

Range: Northern half of Baja California Norte and adjacent part of San Diego Co., California (maps, Shelley, 1996, figs. 22, 76).

Colactis quadrata Loomis

Colactis quadrata Loomis, 1937, Proc. U. S. Nat. Mus., 84: 128, figs. 16e, f, pl. 3, fig. 5. ♂ HT (USNM) from Cave Creek Canyon, Chiracahua Mountains, Cochise Co., Arizona. – Shelley, 1996, Entom. Scandinavica, 27: 34, figs. 9-14.

Range: Extreme southeastern Arizona and adjacent northernmost Sonora (map, Shelley, 1996, fig. 22).

Colactis tiburona (Chamberlin)

Lysiopetalum tiburonum Chamberlin, 1923, Proc. California Acad. Sci., (4) 12: 402, figs. 34-35. ♂ HT (CAS) from an Indian village on the southern end of Tiburón Island, Sonora, Mexico.

Colactis tiburona: Loomis, 1937, Proc. U. S. Nat. Mus. 84: 128.

Colactis sideralis Loomis, 1937, Proc. U. S. Nat. Mus., 84: 125, figs. 16 j,k, pl. 4, figs. 1, 2. ♂ HT (USNM) from Estrella Mountains, without closer locality, Maricopa Co., Arizona. Synonymized by Shelley, 1996.

Colactis loomisi Hoffman, 1954, American Mus. Nov., 1673: 121, figs. 1-5. ♂ HT (AMNH) from Providencia, Durango, Mexico. Synonymized by Shelley, 1996.

Colactis yuma Chamberlin, 1958, Ent. News, 69:121, fig. 1. ♂ HT (USNM) from Laguna Dam, ca. ten miles north of Yuma, Yuma Co., Arizona. Synonymized by Shelley, 1996.

Range: Southwestern Arizona and adjacent California to Durango (map, Shelley, 1996, fig. 22).

Colactis utorum (Chamberlin)

Spirostrephon utorum Chamberlin, 1925, Pan-Pacific Entom., 2: 61. ♂ HT (USNM) from the Green River, Emery Co., Utah.

Colactis utorum: Loomis, 1937, Proc. U. S. Nat. Mus., 84: 130. – Shelley, 1996, Entom. Scandinavica, 27: 36, figs. 15-16.

Colactis saxetana Loomis, 1937, Proc. U. S. Nat. Mus., 84: 122, figs. 16a, b; pl. 3, fig. 2. ♂ HT (USNM) from the north slope of Picacho Mountain, Pinal Co., Arizona. Synonymized by Shelley, 1996.

Colactis baboquivari Loomis, 1937, Proc. U. S. Nat. Mus., 84: 123, figs. 16 c, d; pl. 3, fig. 4. ♂ HT (USNM) from Baboquivari Canyon, southwest of Tucson, in Pima Co., Arizona. Synonymized by Shelley, 1996.

Range: East central Utah to south central Arizona, southern Nevada, southeastern California (map, Shelley, 1996, fig. 22).

Genus **Colactoides** Shelley

Colactoides Shelley, 1997, Myriapodologica, 5: 36. Type species: *C. grandis* Shelley, by original designation.

Colactoides grandis Shelley

Colactoides grandis Shelley, 1997, Myriapodologica, 5: 37, figs. 1-4. ♂ HT (CAS) from a site along the Rio Urique, ca. 8 km southwest of Tejaban, Chihuahua, Mexico.

Genus **Heptium** Loomis

Heptium Loomis, 1937, Proc. U. S. Nat. Mus., 84: 130. Type species: *H. carinellum* Loomis, by original designation. – Shelley, 1996, Entom. Scandinavica, 27: 37.

Two species, extreme southern California (San Bernardino, Riverside, Imperial counties).

Heptium carinellum Loomis

Heptium carinellum Loomis, 1937, Proc. U. S. Nat. Mus., 84: 132, figss. 18f-j, pl. 4, figs. 3,4. ♂ HT (USNM) from "two miles east of 'Indian Head' on the Indio-El Centro road", Imperial Co., California. Shelley (1996: 37) discussed the location of this enigmatic site. – Shelley, 1996, Entom. Scandinavica, 27: 37, figs. 17-19.

Heptium canum Chamberlin, 1941, Bull. Univ. Utah, 36(11): 22, figs. 42-44. ♂ HT (USNM) from "Coyote Wells" (now called Ocotillo), Imperial Co., California. Synonymized by Shelley, 1996.

Range: Riverside and Imperial counties, California (map, Shelley, 1996, fig. 22).

Heptium scamillatum Loomis

Heptium scamillatum Loomis, 1937, Proc. U. S. Nat. Mus., 84: 134, figs. 18a-e, pl. 4, figs. 5, 6. ♂ HT (USNM) from a site along Hy. 74 between Perris and Elsinore, Riverside Co., California. – Shelley, 1996, Entom. Scandinavica, 27: 38, figs. 20-21.

Range: Riverside and San Bernardino counties, California (map, Shelley, 1996, fig. 22).

Tribe Diactidini Shelley

Diactidini Shelley, 1996, Entom. Scandinavica, 27: 40.

Three genera, extreme southern California.

Genus **Caliactis** Shelley

Caliactis Shelley, 1996, Entom.Scandinavica, 27: 47. Type species: *C. bistolata* Shelley, by original designation.

One species, southern California.

Caliactis bistolata Shelley

Caliactis bistolata Shelley, 1996, Entom. Scandinavica, 27: 49, figs. 60-63. ♂ HT (LACM) at Mission Viejo, Orange Co., California.

Genus **Diactis** Loomis

Diactis Loomis, 1937, Proc. U. S. Nat. Mus., 84: 110. Type species: *D. soleata* Loomis, by original designation. – Shelley, 1996, Entom. Scandinavica, 27: 40.

Etiron Chamberlin, 1941, Bull. Univ. Utah, 31(11): 21. Type species: *E. paroicum* Chamberlin, by original designation. Synonymized by Hoffman, 1980.

Eight very localized species, southwesternmost California.

Shelley (1996) distinguished three species groups, not followed here to maintain alphabetical consistency.

Removed from genus: "*Etiron pearcei*" Chamberlin, 1941, see *Tynomma mutans* (Chamberlin).

Diactis amniscela Shelley

Diactis amniscela Shelly, 1996, Entom. Scandinavica, 27: 46, figs. 52-55. ♂ HT (LACM) from Banning, Riverside Co., California.

Diactis cupola Shelley

Diactis cupola Shelley, 1996, Entom. Scandinavica, 27: 43, figs. 36-38. ♂ HT (USNM) from a site three miles north of Santa Monica, Los Angeles Co., California.

Range: Santa Monica Mountains, southern California.

Diactis frondifera Loomis

Diactis frondifera Loomis, 1937, Proc. U. S. Nat. Mus. 84: 116, fig. 17f. ♂ HT (USNM) from "Torrey Pines" near La Jolla, San Diego Co., California. – Shelley, 1996, Entom. Scandinavica, 27: 45, figs. 44-48.

Range: Coastal region in San Diego and Los Angeles counties, California (map, Shelley, 1996, fig. 64).

Diactis jacinto Shelley

Diactis jacinto Shelley, 1996, Entom. Scandinavica, 27: 46, figs. 49-51. ♂ HT (USNM) from a site along Hy. 243 in the San Jacinto Mountains, south of Banning, Riverside Co., California.

Diactis procera Shelley

Diactis procera Shelley, 1996, Entom. Scandinavica, 27: 41, figs. 28-31. ♂ HT (LACM) from Silverado Canyon, ca. 11 miles north of Mission Viejo, Orange Co., California.

Diactis soleata Loomis

Diactis soleata Loomis, 1937, Proc. U. S. Nat. Mus. 84: 113, figs. 17b-e, pl. 3, fig. 1. ♂ HT (USNM) from along Temescal Road, ca. 10.2 miles south of Corona, Riverside Co., California. – Shelley, 1996, Entom. Scandinavica, 27: 41, figs. 23-27.

Range: Three localities in Riverside and Los Angeles counties, California (map, Shelley, 1996, fig. 64).

Diactis strumella Shelley

Diactis strumella Shelley, 1996, Entom. Scandinavica, 27: 43, figs. 32-35. ♂ HT (USNM) from Laguna Beach, Orange Co., California.

Diactis triangula Loomis

Diactis triangula Loomis, 1937, Proc. U. S. Nat. Mus., 84: 114, fig. 17e. ♂ HT (USNM) from Cottonwood Creek, ca. 46 miles east of San Diego, California (but the beginning reference point is unknown), on the road between San Diego and El Centro.

Etiron paroicum Chamberlin, 1941, Bull. Univ. Utah, 31(11): 21, figs. 37-41. ♂ HT (USNM) from Mountain Spring, Riverside Co., California, more localized by Shelley (1996) as "probably between Laguna Jct. and Live Oak Spgs., ca. 13.6 mi. (25.0 km) ESE Alpine...". Synonymized by Shelley, 1996.

Range: Apparently a somewhat inland north-south belt from San Bernardino Co., California to northernmost Baja California Norte (map, Shelley, 1996, fig. 64).

Genus **Florea** Shelley

Florea Shelley, 1996, Entom. Scandinavica, 27: 46. Type species: *F. sinuata* Shelley, by original designation.

Monobasic, southwesternmost California.

Florea sinuata Shelley

Florea sinuata Shelley, 1996, Entom. Scandinavica, 27: 46, figs. 56-59. ♂ HT (USNM) from an unspecified site in the Trabuco Ranger District, Cleveland National Forest, Orange Co., California.

Tribe Tynommatini Shelley

Tynommatini Shelley, 1996, Entom. Scandinavica, 27: 49 (*nomen translatum*, ex Tynommatinae Hoffman, 1980).

Two genera, coastal central California, southwestern Utah.

Genus **Idrionaria** Shelley

Idrionaria Shelley, 1996, Entom. Scandinavica, 27: 54. Type species: *I. dineh* Shelley, by original designation.

One species, Utah.

Idrionaria dineh Shelley

Idrionaria dineh Shelley, 1996, Entom. Scandinavica, 27: 54, figs. 72-74. ♂ HT (USNM) from Pintura, Washington Co., Utah.

Range: Two localities in Washington Co., Utah.

Genus **Tynomma** Loomis

Tynomma Loomis, 1937, Proc. U. S. Nat. Mus., 84: 117. Type species: *T. sedecimum* Loomis, by original designation. – Shelley, 1996, Entom. Scandinavica, 27: 50 (revision).

Three species, central western California, immediately north and south of San Francisco Bay.

Tynomma magnum Buckett & Gardner

Tynomma magnum Buckett & Gardner, 1969, Pan-Pacific Entom, 45: 207, figs. 2, 4, 7, 10. ♂ HT (UCD) from a site seven miles east of Monterey, Monterey Co., California. – Shelley, 1996, Entom. Scandinavica, 27: 52, figs. 68-70.

Range: Numerous localities in northern Monterey Co., California (map, Shelley, 1996, fig. 71).

Tynomma mutans (Chamberlin)

Lysiopetalum mutans Chamberlin, 1910, Ann. Entom. Soc. America, 3: 233, pl. 30, figs. 1-10, pl. 31, figs.1, 2. ♀ ST (USNM) from Stanford, Santa Clara Co., California.

Tynomma mutans: Loomis, 1937, Proc. U. S. Nat. Mus., 84: 120. – Shelley, 1996, Entom. Scandinavica, 27:51, figs. 65-67.

Tynomma sedecimum Loomis, 1937, Proc. U. S. Nat. Mus., 84: 118, figs. 17j-l, pl. 3, fig. 3. ♂ HT (USNM) from a site between Vallejo and Cordelia, Solano Co., California. Synonymized by Shelley, 1996.

Tynomma consangineum Loomis, 1937, Proc. U. S. Nat. Mus., 84: 119, figs. 17g-i. ♂ HT (USNM) from the Santa Cruz Mountains between Santa Cruz and Holy City, Santa Cruz Co., California. Synonymized by Shelley, 1996.

Etiron pearcei Chamberlin, 1941, Bull. Univ. Utah, 31(11): 22. ♀ HT (USNM) from Castro Valley, Alameda Co., California. Synonymized by Shelley, 1996.

Range: central California coastal region from Sonoma Co. south to northern San Benito Co.(map, Shelley, 1996, fig. 71).

Tynomma schlingeri Gardner

Tynomma schlingeri Gardner, 1973, Pac-Pacific Entom., 49: 270, figs. 1, 2. ♂ HT (?UCD) from Del Puerto Canyon, 1200 ft., Frank Raines Park, Stanislaus Co., California.

Tynomma gardneri Shelley, 1996, Entom. Scandinavica, 27: 54, figs. 82-84. ♂ HT (UCD) from the same locality (and apparently the same type specimens) as the preceeding species. **New synonymy!**

Range: Known from several localities in Santa Clara and Stanislaus counties, California (map, Shelley, 1996, fig. 71).

Although Gardner (1973) stated that the type series of one male and four females would be deposited in the California Academy collection, apparently he forgot to do so and left them, unmarked as types, in the UCD collection where they were subsequently discovered and recognized as new by Dr. Shelley.

CALLIPODIDA OF UNCERTAIN FAMILY POSITION

Tribe Texophonini Shelley

Texophonini Shelley, 1989, Southwestern Natur., 34: 382; 1996, Entom. Scandinavica, 27: 330, 61.

Following the arrangement in my 1980 classification, Shelley originally placed this monobasic tribe in the subfamily Acanthopetalinae but later (1996) relocated it in the Tynommatinae as a sister-group of the Colactidini. Despite the evidence he adduced to support this change, I am not fully convinced that the final resting place of this small group has been identified although I concur that tribal status is merited.

Genus **Texophon** Chamberlin

Texophon Chamberlin, 1946, Ent. News, 57: 98. Type species: *T. nessium* Chamberlin, by original designation. – Shelley, 1989, Southwestern Natur., 34: 383.

Two species, southern Texas.

Texophon nessium Chamberlin

Texophon nessius [*sic*!] Chamberlin, 1946, Ent. News, 57: 98, figs. 1, 2. ♂ HT (USNM) from a site near Laguna Madre, 23 miles southeast of Harlingen, Cameron Co., Texas.

Texophon nessium: Shelley, 1989, Southwestern Natur., 34: 385, fig. 2, A-C.

Range: Known from two localities in Cameron Co., Texas.

Texophon aransas Shelley

Texophon aransas Shelley, 1989, Southwestern Natur., 34: 387, figs 3, A-D. ♂ HT (FSCA) from the Welder Wildlife Refuge, seven miles north of Sinton, San Patricio Co., Texas.

Order Chordeumatida Koch

The internal classification of this large and complex order has been greatly improved during the past several decades by many revisionary studies of individual families or smaller taxa, chiefly at the hands of Golovatch, Mauriès, and Shear. So far, however, no new organization of families has emerged, and to maintain consistency with the 1980 "Classification" I here follow the arrangement in that reference as a default measure.

Curiously, there has been no "third opinion" published on the ambiguous status of the family Striariidae, which I continue within the limits of a separate suborder Striariidea because of the structure of the gonapophysis of the 2nd pair of legs in males, a conspicuous membranous tube extending from the posterior side of the coxae.

A subordinal taxon named "Conotelsonia" was proposed by Attems (1959: 346) to include the single family Urochordeumidae [sic]. I agree with Dr. Shear (1972: 260) that Attems was misled by Silvestri's drawing of the 2nd pair of male legs in *Urochordeuma* (1913, fig. II, 2), which is incorrect in that the structure labeled "P" (penis) must be the coxa instead (in order for that leg to have the correct number of podomeres).

Suborder Striariidea Cook

Family Striariidae Bollman

Striariidae Cook, 1895, Ann. New York Acad. Sci.: 9: 4 (nomen translatum ex Striariinae Bollman, 1893). – Cook, 1899, Proc. U. S. Nat. Mus., 21: 670. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 257.

Three nominal genera, Appalachian region, west coast of United States.

Genus **Speostriaria** Causey

Speostriaria Causey, 1960, Proc. Biol. Soc. Washington, 73: 25. Type species: *Striaria shastae* Causey, 1958, by original designation. Synonymy with *Striaria* implied by Shear, 1972.

One species, California.

Speostriaria shastae (Causey)

Striaria shastae Causey, 1958, Proc. Biol. Soc. Washington, 71: 182. ♀ HT (AMNH) from Samwel Cave, Shasta Co., California.

Speostriaria shastae: Causey, 1960, Proc. Biol. Soc. Washington, 73: 26, figs. 1-5.

Genus **Striaria** Bollman

Striaria Bollman, 1888, Ann. New York Acad. Sci., 4: 108. Type species: *S. granulosa* Bollman, byoriginal designation ("gen. et sp. nov."). – Cook, 1899, Proc. U. S. Nat. Mus., 21: 671. – Loomis, 1936, Journ. Washington Acad. Sci., 26: 409 (key to then-known species).

Amplaria Chamberlin, 1941, Bull. Univ. Utah, 31(12): 9. Type species: *A. eutypa* Chamberlin, by original designation. Synonymized with *Striaria* by Hoffman, 1980.

Five nominal species, eastern United States; six, California.

Striaria antica Causey

Striaria antica Causey, 1952, Proc. Biol. Soc. Washington, 65: 112, figs. 1-3. ♂ HT (INHS) from Turkey Run State Park, Montgomery Co., Indiana.

Striaria californica Cook

Striaria californica Cook, 1899, Proc. U. S. Nat. Mus., 21: 675, pl. 53, fig. 2a. ♀ HT (USNM) from "California, probably near Sausalito [Marin County]." – Loomis, 1936, Journ. Washington Acad. Sci., 26: 409, fig. 1E-F.

Range: Recorded from several localities peripheral to San Francisco Bay.

Striaria carmela Chamberlin

Striaria carmela Chamberlin, 1947, Proc. Biol. Soc. Washington, 60: 9, figs. 1, 2. ♂ HT (USNM) from the Hastings Reservation, Monterey Co., California.

Striaria causeyae Chamberlin

Striaria causeyae Chamberlin, 1940, Canadian Entom., 72: 58. ♂ HT (?USNM) from the "Duke Forest", probably the unit in Durham Co., North Carolina. – Shelley, 1978, Journ. Nat. Hist., 12: 51.

Amplaria causeyae: Chamberlin & Hoffman, Bull. U. S. Nat. Mus. 212: 115.

Range: Recorded from eight counties in the Piedmont region of North Carolina by Shelley (1978).

Striaria columbiana Cook

Striaria columbiana Cook, 1899, Proc. U. S. Nat. Mus., 21: 674, pl. 53, fig. 3a, pl. 54, figs. 1a-m. ♂ HT (USNM) from Washington, D.C.(several localities mentioned, but none specified as type locality).

Range: District of Columbia, adjacent Maryland, northern Virginia.

Striaria eldora Chamberlin

Striaria eldora Chamberlin, 1953, Ent. News, 64: 95. ♂ HT (?USNM) from Crystal Cosumnes Cave, Eldorado Co., California.

Striaria eutypa (Chamberlin)

Amplaria eutypa Chamberlin, 1941, Bull. Univ. Utah, 31(12): 9. ♀ ST (?USNM) from nine miles north of Placerville, Eldorado Co., California.

Striaria granulosa Bollman

Striaria granulosa Bollman, 1888, Ann. New York Acad. Sci., 10: 108. STs (?USNM) from Beaver Creek, Jefferson Co., Tennessee. – Cook, 1899, Proc. U. S. Nat. Mus., 21: 670, pl. 53, figs. 1-a-f.

Range: Not currently defined, but doubtless general in the southern Appalachians of eastern Tennessee and western North Carolina.

Striaria nana Loomis

Striaria nana Loomis, 1936, Journ. Washington Acad. Sci., 26: 407, figs. 1a-c. ♂ HT (USNM) from Altamont Pass, above Niles, Alameda Co., California.

Range: Reported also (female only) from Santa Cruz Co., California (Loomis, 1936).

Striaria nazinta Chamberlin

Striaria nazinta Chamberlin, 1910, Ann. Ent. Soc. America, 3: 242, p. 35, figs. 2-6. Types (location unknown) from Portland, Multnomah Co., Oregon.

Amplaria nazinta: Chamberlin, 1941, Bull. Univ. Utah, 31(12): 9.

Striaria zygoleuca Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., 66: 16, fig. 4. ♂ HT (USNM) from Highlands, Macon Co., North Carolina.

Range: Southern Appalachians in western North Carolina and eastern Tennessee.

It is highly probable that this name is a junior synonym of *S. granulosa*.

Genus **Vaferia** Causey

Vaferia Causey, 1958, Proc. Biol. Soc. Washington, 71: 179. Type species: *Striaria imberbis* Loomis, by original designation.

One species, California.

Vaferia imberbis (Loomis)

Striaria imberbis Loomis, 1936, Journ. Washington Acad. Sci., 26: 408, fig. 1d. ♀ HT (USNM) from south of Atascadero, San Luis Obispo Co., California.

Suborder Chordeumatidea Koch

Superfamily Cleidogonoidea Cook

Cleidogonoidea Shear, 1972, Bull. Mus. Comp. Zool., 144: 274. Nomen translatum ex family Cleidogonidae Cook, 1896. – Hoffman, 1980, Classification of the Diplopoda, p. 130.

Family **Cleidogonidae** Cook

Cleidogonidae Cook, 1896, Brandtia, 2: 8. – Shear, 1972, Bull. Mus. Comp. Zool. 144: 156 (revision). – Hoffman, 1980, Classification of the Diplopoda, p. 130.

Mexiceumidae Verhoeff, 1926, Zool. Anz., 68: 110.

Pseudocleididae Attems, 1926, in: Kukenthal & Krumbach, Handbuch der Zoologie, 4: 170 (in part).

Bactropidae Chamberlin & Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc. 71: 6. Synonymized by Shear, 1972.

Dybsiidae Loomis, 1964, Fieldiana Zool., 47: 100. Synonymized by Shear, 1972.

Bactropodellidae Jeekel, 1969, Entom. Bericht. 29: 88. New name for Bactropidae. Synonymized by Shear, 1972.

Six genera, eastern United States (Connecticut, Illinois) to Panama.

Genus **Cabraca** Shear

Cabraca Shear, 1982, Myriapodologica, 1: 65. Type species: *C. unigon* Shear, by original designation.

One species, Mexico (Tamaulipas).

Cabraca unigon Shear

Cabraca unigon Shear, 1982, Myriapodologica, 1: 65, figs. 1-6. 0 HT (AMNH) from "Ejido", Yerbabuena, Tamaulipas, Mexico.

Genus **Cleidogona** Cook

Cryptotrichus Packard, 1883, Proc. American Philos. Soc., 21: 189 (preoccupied). Type species: *Spirostrephon caesioannulatus* Wood, 1865, by original designation.

Cleidogona Cook, 1895, in: Cook & Collins, Ann. New York Acad. Sci., 9:3. Type species: *Spirostrephon caesioannulata* Wood, 1865, by direct substitution [the designation of *Cleidogona major* by Cook & Collins is invalid]. – Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 41. – Shear, 1972, Bull. Mus. Comp. Zool. 144: 195 (revision).

Mexiceuma Verhoeff, 1926, Zool. Anz., 68: 112. Type species: *M. maculata* Verhoeff, by monotypy. Synonymized by Shear, 1972.

Rhabdarona Chamberlin & Mulaik, 1941, Journ. New York Ent. Soc., 49: 60. Type species: *R. bacillipus* Chamberlin & Mulaik, by original designation. Synonymized by Shear, 1972.

Cavota Chamberlin, 1942, Bull. Univ. Utah, 33(4): 8. Type species: *C. crucis* Chamberlin, by original designation. Synonymized by Shear, 1972.

Hirsutogona Kraus, 1954. Senckenberg. Biol. 35: 329. Type species: *H. minutissima* Kraus, by original designation. Synonymized by Shear, 1972.

Mecistopus Loomis, 1959, Journ. Washington Acad. Sci., 49: 162. Type species: *M. varicornis* Loomis, by original designation. Synonymized by Shear, 1972.

Akacandra Loomis, Fieldiana Zool., 47: 99. Type species: *A. austrina* Loomis, by original designation. Synonymized by Shear, 1972.

Costaricia Loomis, 1966, Proc. Biol. Soc. Washington, 79: 226. Type species: *C. curvipes* Loomis, by original designation. Synonymized by Shear, 1972.

83 species, Connecticut to Panama (Shear, 1972, maps 10, 11). So far unrecorded from eastern Texas.

The great number of Mesamerican species now referred to *Cleidogona* (as well as many more still undescribed forms from throughout the range), and the wide range of variability expressed in the gonopods, suggests that recognition of some species-groups as genera may be deemed desireable in the future.

Shear (1972) organized most members of this genus into discrete subgeneric groups. My decision to follow an alphabetic arrangement (for consistency of format and user convenience and to accomodate the species not seen by Shear and not placed by him in any group) in no way impugns the validity of that author's arrangement.

Cleidogona accretis Shear

Cleidogona accretis Shear, 1972, Bull. Mus. Comp. Zool. 144: 239, figs. 394-396. ♂ HT (MCZ) from 2 miles south of Increase, near Little Creek, Lauderdale Co., Mississippi.

Cleidogona alata Causey

Cleidogona alata Causey, 1961, Florida Entom., 44: 38, figs. 5-7. ♂ HT (AMNH), from 1 mile south of Ila, Macon Co., Georgia. – Shear, 1972, Bull. Mus. Comp. Zool. 144: 233, figs. 349-351.

Cleidogona arco Shear

Cleidogona arco Shear, 1986, Texas Mem. Mus. Speleol. Monogr,., 1: 73, figs. 23, 24. ♂ HT (AMNH) from Sótano del Arco, Cotlaixco, Zongolica, Veracruz, Mexico.

Cleidogona arkansana Causey

Cleidogona arkansana Causey, 1954, Tulane Stud. Zool., 2: 66, figs. 6-9. ♂ HT not present at AMNH, the published repository, possibly lost, from four miles east of Princeton, Dallas Co., Arkansas.

Cleidogona atoyaca Chamberlin

Cleidogona atoyaca Chamberlin, 1943, Bull. Univ. Utah, 34(7): 34, figs. 66-68. ♂ HT (USNM) from Atoyac, Vera Cruz, Mexico. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 221, figs. 281-283.

Range: Type locality and El Fortin de las Flores, Veracruz, Mexico.

Cleidogona atropos Shear

Cleidogona atropos Shear, 1972, Bull. Mus. Comp. Zool., 144: 230, figs. 328-331. ♂ HT (MCZ) from one mile south of Mummerlyn Swamp, Burke Co., Georgia.

Cleidogona australis Loomis

Cleidogona australis Loomis, 1966, Proc. Biol. Soc. Washington, 79: 226, figs. 159, 163. ♂ HT (not located at USNM, the published repository, possibly lost), from Highlands Hammock State Park, Sebring, Highlands Co., Florida

Cleidogona austrina (Loomis)

Akacandra austrina Loomis, 1964, Fieldiana Zool., 47: 99, figs. 9N-Q. ♂ HT (FMNH, lacking gonopods) from Cerro Punta, Prov. Chiriqui, Panama.

Cleidogona austrina: Shear, 1972, Bull. Mus. Comp. Zool., 144: 158.

Cleidogona bacillipus (Chamberlin & Mulaik)

Rhabdarona bacillipus Chamberlin & Mulaik, 1941, Journ. New York Ent. Soc., 49: 60. ♂ HT (USNM), from "Raven Ranch", Kerr Co., Texas.

Mecistopus varicornis Loomis, 1959, Journ. Washington Acad. Sci., 49: 162, figs. 10-14. ♂ HT (USNM) from Hwy 16 between Kerrville and Medina, Kerr-Bandera Cos., Texas. Synonymized by Shear, 1972.

Cleidogona bacillipus: Shear, 1972, Bull. Mus. Comp. Zool., 144: 216, figs. 244-247.

Range: Four counties in southern Texas, single localities in Nuevo Leon and Coahuila, Mexico.

Cleidogona baroqua Shear

Cleidogona baroqua Shear, 1972, Bull. Mus. Comp. Zool., 144: 209, figs. 197-200. ♂ HT (MCZ) from Sótano de San Augustín, Huautla de Jiménez, Oaxaca, Mexico.

Range: Numerous caves near Huautla de Jiménez, Oaxaca.

Cleidogona bifurca Loomis

Cleidogona bifurca Loomis, 1974, Florida Entom., 57: 184, figs. 23, 24. ♂ HT (FSCA) from Dulce Nombre, near Cartago, Prov. Cartago, Costa Rica.

Cleidogona camazotz Shear

Cleidogona camazotz Shear, 1972, Bull. Mus. Comp. Zool., 144: 215, figs. 236-238. ♂ HT (MCZ) from Hwy. 200, 3 miles west of state border, Guerrero.

Range: Recorded also from 22.2 miles south of San Pedro Juchatengo, near Pinotepa Nacional, Oaxaca, Mexico.

Cleidogona caroliniana Causey

Cleidogona caroliniana Causey, 1957, Journ. Kansas Ent. Soc., 30: 115, figs. 4, 5. ♂ HT (AMNH) from Fayetteville, Cumberland Co., North Carolina.

Cleidogona caesioannulata (Wood)

Spirostrephon caesioannulatus Wood, 1865, Trans. American Philos. Soc. 13: 194. ♂ HT (USNM) from "Western Pennsylvania" [probably vicinity of Pittsburgh].

Cleidogona caesioannulata: Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 43, figs. 138, 139, 145-148, 150. - Shear, 1972, Bull. Mus. Comp. Zool. 144: 236, figs. 378-384.

Cleidogona exaspera: Williams & Hefner, 1928, Bull. Ohio Biol. Surv. 18: 117 [new name for *Cleidogona caesioannulata* "as described by Cook & Collins"]. ♂ HT (USNM) from Delaware Co., Ohio. Synonymized by Shear, 1972.

Range: Southeastern Pennsylvania and southern Ohio south to Virginia Beach, Va., and Durham and Mount Mitchell, N.C. (Shear, 1972, map 12).

Cleidogona ceibana Chamberlin

Cleidogona ceibana Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 11, pl. 6, figs. 1-6. ♂ HT (USNM) from La Ceiba, Prov. Atlantida, Honduras. - Shear, 1972, Bull. Mus. Comp. Zool. 144: 208, figs. 188, 189.

?*Hirsutogona ceibana*: Kraus, 1954, Senckenberg. Biol. 35: 329.

Cleidogona celerita Williams & Hefner

Cleidogona celerita: Williams & Hefner, 1928, Bull. Ohio Biol. Surv. 18: 117, fig. 14c. ♂ HT (USNM) from "Ohio" without further data. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 236, figs. 374-377.

Cleidogona inflata Causey, 1951, Journ. Washington Acad. Sci. 41: 90, figs. 14-19. ♂ HT (INHS) from Starved Rock State Park, Putnam Co., Illinois. Synonymized by Shear, 1972.

Range: Ohio west to Lake, Putnam, and Champaign cos., Illinois.

Cleidogona chac Shear

Cleidogona chac Shear, 1986, Texas Mem. Mus. Speleol. Monogr. 1: 72, figs. 21, 22. ♂ HT (AMNH) from 25-30 km from Huautla de Jiménez on the trail to Cerro Rabón, Oaxaca, Mexico.

Cleidogona chacmool Shear

Cleidogona chacmool Shear, 1972, Bull. Mus. Comp. Zool., 144: 211, figs. 213-216. ♂ HT (MCZ) from 60.6 miles south of Valle Nacional, Oaxaca, Mexico.

Cleidogona chiapas Shear

Cleidogona chiapas Shear, 1982, Texas Mem. Mus. Bull. 28: 151, figs. 21-25. ♂ HT (AMNH) from Cueva II de la Canada, La Quinta, San Cristobal de las Casas, Chiapas, Mexico.

Cleidogona chontala Shear

Cleidogona chontala Shear, 1972, Bull. Mus. Comp. Zool., 144: 210, figs. 205-208. ♂ HT (MCZ) from 27.5 miles south of Valle Nacional, Oaxaca, Mexico.

Cleidogona coatlicue Shear

Cleidogona coatlicue Shear, 1986, Texas Mem. Mus. Speleol. Monogr. 1: 75, figs. 31-33. ♂ HT (AMNH) from Pozo del Arrecife, 800 m northeast of Ranch Nuevo, Tamaulipas, Mexico.

Cleidogona conotyloides Shear

Cleidogona conotyloides Shear, 1972, Bull. Mus. Comp. Zool., 144: 219, figs. 269-274. ♂ HT (MCZ) from 8.6 miles east of San Cristobal de las Casas, 8500-9000 ft., Chiapas, Mexico.

Cleidogona crucis (Chamberlin)

Cavota crucis Chamberlin, 1942, Bull. Univ. Utah, 33(4): 8, figs. 3-7. Location of ♂ HT unknown (?USNM) from Cueva de Atoyac, Veracruz, Mexico.

Range: Several caves in central Veracruz.

Cleidogona crystallina Shear

Cleidogona crystallina Shear, 1972, Bull. Mus. Comp. Zool., 144: 212, figs. 217-220. ♂ HT (MCZ) from Cueva Chica de la Perra, six miles northwest of Gómez Farias, Tamaulipas, Mexico.

Cleidogona curvipes (Loomis)

Costaricia curvipes Loomis, 1966, Proc. Biol. Soc. Washington, 79: 227, figs. 1-13. ♂ HT (?USNM, possibly lost), from Cairo, Prov. Limón, Costa Rica.

Cleidogona curvipes: Shear, 1972, Bull. Mus. Comp. Zool. 144: 158.

Cleidogona cyclipes Loomis

Cleidogona cyclipes Loomis, 1969, Florida Entom., 52: 247, figs. 2-4. ♂ HT (USNM) from Alexander City, Tallapoosa Co., Alabama.

Cleidogona decurva Shear

Cleidogona decurva Shear, 1972, Bull. Mus. Comp. Zool., 144: 221, figs. 278-280. ♂ HT (MCZ) from Sumidero de Camino, ten miles northwest of Comitán, Chiapas, Mexico.

Cleidogona eulalia Shear

Cleidogona eulalia Shear, 1982, Texas Mem. Mus. Bull. 28: 149, figs. 10-14. ♂ HT (AMNH) from Cueva de los Resadores, south of Eulalia, Dept. Huehuetenango, Guatemala.

Cleidogona felipiana Shear

Cleidogona felipiana Shear, 1974, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171: 254, figs. 9-13. ♂ HT (MCZ) from Cueva del Rayo de San Felipe, San Cristóbal de las Casas, Chiapas, Mexico.

Cleidogona fidelitor Shear

Cleidogona fidelitor Shear, 1972, Bull. Mus. Comp. Zool., 144: 232, figs. 341-343. ♂ HT (MCZ) from Mount Torry Furnace wayside, ca. 7 miles south of Lyndhurst on Va. Rte. 664, Augusta Co., Virginia..

Range: Known also from Peaks of Otter, Bedford Co., Virginia.

The name of the type locality was inadvertantly mispelled "Tory" on the field label and not corrected before it had misled Dr. Shear into his choice of a species name.

Cleidogona forceps Cook & Collins

Cleidogona forceps Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 49, figs. 159, 163. ♂ HT (lost, not in USNM), from an unknown locality.

Cleidogona forficula Shear

Cleidogona forficula Shear, 1972, Bull. Mus. Comp. Zool., 144: 208, figs. 190-192. ♂ HT (MCZ) from San Cristobal de las Casas, Chiapas, Mexico.

Cleidogona fustis Cook & Collins

Cleidogona fustis Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 49, figs. 151-153. ♂ HT (?USNM), probably lost), labeled only "Indiana."

Cleidogona caesioannulata (not of Wood, 1865): Williams & Hefner, 1928, Bull. Ohio Biol. Surv., 18: 116.

Range: Indiana to southwestern Virginia (Shear, 1972, map 12).

Cleidogona georgia Shear

Cleidogona georgia Shear, 1972, Bull. Mus. Comp. Zool., 144: 233, figs. 352-358. ♂ HT (MCZ) from 4.2 miles southeast of Cochran, Bleckley Co., Georgia.

Cleidogona grenada Shear

Cleidogona grenada Shear, 1972, Bull. Mus. Comp. Zool., 144: 234, figs. 362-367, 369. ♂ HT (MCZ) from 3.4 miles east of Grenada, Grenada Co., Mississippi.

Range: Recorded also from Mobile, Alabama.

Cleidogona gucumatz Shear

Cleidogona gucumatz Shear, 1972, Bull. Mus. Comp. Zool., 144: 210, figs. 201-204. ♂ HT (MCZ) from 1.5 miles north of El Punto on road to Ixtlán de Juarez, Oaxaca, Mexico.

Cleidogona godmani Pocock

Cleidogona godmani Pocock, 1903, Biol. Centr.-Amer., Diplopoda, p. 52, pl. 5, figs. 8a-c. ♂ HT (BMNH) from Omilteme (north of Zimpango), Guerrero, Mexico.

Cleidgona hadena Causey

Cleidogona hadena Causey, 1961, Florida Entom., 44: 38, figs. 3, 4. ♂ HT (AMNH), from Juniper Springs, Marion Co., Florida. - Shear, 1972, Bull. Mus. Comp. Zool., 144: 231, figs. 335-337.

Cleidogona hauatla Shear

Cleidogona hauatla Shear, 1972, Bull. Mus. Comp. Zool. 144: 217, figs. 253-256. ♂ HT (MCZ) from 20 miles west of Hauatla, Oaxaca, Mexico.

Cleidogona hoffmani Shear

Cleidogona hoffmani Shear, 1972, Bull. Mus. Comp. Zool., 144: 229, figs. 320-327. ♂ HT (MCZ) from Roan Mountain below Carver's Gap, Mitchell Co., North Carolina.

Range: Roan Mountain, Tenn.-NC., north to vicinity of Bluefield, West Virginia (Shear, 1972, map 13).

Cleidogona hunapu Shear

Cleidogona hunapu Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult. 171: 236, figs. 1-8. ♂ HT (AMNH) from Cueva del Burro, Lago de Malpaso, Rio Encajonada, Chiapas, Mexico.

Cleidogona inexpectata Hoffman

Cleidogona inexpectata Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., 66: 22, figs. 23-25. ♂ HT (USNM) from Chimneys Camp Ground, Great Smoky Mountains National Park, Sevier Co., Tennessee.

Range: Also recorded from two localities on Signal Mountain, Tennessee (Shear, 1972, Map 13).

Cleidogona jamesoni Shear

Cleidogona jamesoni Shear, 1982, Texas Mem. Mus. Bull. 28: 153, figs. 26-29. ♂ HT (AMNH) from Cueva del Volcancillo, 5 km southeast of Las Vigas, Veracruz, Mexico.

Cleidogona jocassee Hoffman

Cleidogona jocassee Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., 66: 19, figs. 215-218. ♂ HT (USNM) from Jocassee, Oconee Co., South Carolina.

Range: Numerous localities in western North Carolina, western South Carolina, and northern Georgia (Shear, 1972, map 13).

Cleidogona lachesis Shear

Cleidogona lachesis Shear, 1972, Bull. Mus. Comp. Zool., 144: 228, figs. 307-309. ♂ HT (MCZ) from Linville Falls, Avery Co., North Carolina.

Range: Avery County, N. C., north to Mount Rogers, Grayson Co., Virginia.

Cleidogona laminata Cook & Collins

Cleidogona laminata Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 48, figs. 164-171. ♂ HT (USNM)from uncertain locality, possibly Arkansas. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 238, figs. 385-387 (restriction of type locality to six miles east of Imboden, Lawrence Co., Arkansas).

Cleidogona aspera Causey, 1951, Journ. Washington Acad. Sci., 41: 78, figs. 1-4. ♂ HT (lost during postal shipment) from six miles east of Imboden, Lawrence Co., Arkansas. Synonymized by Shear, 1972.

Range: Recorded from Clay, Dallas, Lawrence, and Randolph cos., Arkansas, and Jackson Par., Louisiana.

Cleidogona laquinta Shear

Cleidogona laquinta Shear, 1972, Bull. Mus. Comp. Zool., 144: 219, figs. 266-268. ♂ HT (MCZ) from three miles east of San Cristobal de las Casas, on road to La Quinta, Chiapas, Mexico.

Cleidogona maculata (Verhoeff)

Mexiceuma maculata Veroeff, 1926, Zool. Anz., 68: 112, figs. 12-15. ♂ HT (ZSM) from Desierto de los Leones, near Mexico City, Distrito Federal, Mexico.

Cleidogona leona Chamberlin, 1943, Bull. Univ. Utah, 34(7): 34, figs. 69-72. ♂ HT (USNM) from Desierto de los Leones, Distrito Federal, Mexico. Synonymized by Shear, 1972.

Cleidogona propria Causey, 1957, Journ. Kansas Ent. Soc., 30: 119, figs. 13-14. ♂ HT (AMNH) from "Puerto las Peras, Hy. 15", Michoacan, Mexico. Synonymized by Shear, 1972.

Cleidogona maculata: Shear, 1972, Bull. Mus. Comp. Zool., 144: 213, figs. 226-228.

Range: Several localities in the Distrito Federal and Michoacan, Mexico.

Cleidogona major Cook & Collins

Cleidogona major Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 47, figs. 110-137. ♂ HT (USNM) from Washington, D.C. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 224, figs. 294-296.

Range: District of Columbia south and west to eastern Kentucky and western North Carolina (Shear, 1972, map 12); subsequently recorded from six counties in the Piedmont of North Carolina (Shelley 1978).. A male from Connecticut (now lost) appears to have been this species.

Cleidogona mandeli Chamberlin

Cleidogona mandeli Chamberlin, 1952, Great Basin Nat., 12: 13, figs. 4-7. Location of ♂ HT unknown, perhaps lost (said to be FMNH), from Volcán Tajumulco, Dep. San Marcos, Guatemala.

Cleidogona margarita Hoffman

Cleidogona margarita Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., 66: 21, figs. 19-22. ♂ HT (USNM) from Chimneys Camp Ground, Great Smoky Mountains National Park, Sevier Co., Tennessee. – Shear, 1972, Bull. Mus. Comp. Zool. 144: 228, figs. 310-315.

Range: Great Smoky Mountains northeast through the Unaka Mountains to Watauga Co., N.C. (Shear, 1972, map 13).

Cleidogona mayapec Shear

Cleidogona mayapec Shear, 1972. Bull. Mus. Comp. Zool., 144: 215, figs. 239-241. ♂ HT (MCZ) from one mile south of Rio Blanco, Querétero, Mexico.

Cleidogona medialis Shelley

Cleidogona medialis Shelley, 1976, Florida Entom., 59: 325, figs. 1-7. ♂ HT (USNM) from Blowing Rock, Watauga Co., North Carolina.

Range: Also known from Henry Co., Virginia, and Gaston and Davidson cos., North Carolina..

Cleidogona mexicana (Humbert & DeSaussure)

Craspedosoma mexicanum Humbert & DeSaussure, 1869, Rev. & Mag. Zool., (2): 21: 153. ♀ HT(MHNG) labeled "Le Mexique: Cordillère orientale". The locality doutbless refers to a site between Cordoba, Veracruz, and Cuernavaca, Morelos. – DeSaussure & Humbert, 1872, Miss. Sci. Mexique, Zool., 6(2): 59, pl. I, figs. 15a-d.

Cleidogona mexicana: Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 52, figs. 105-109. – Pocock, 1903, Biol. Centr.-Amer., Diplopoda, p. 53.– Shear, 1972, Bull. Mus. Comp. Zool., 144: 207, fig. 187.

Cleidogona minima Causey

Cleidogona minima Causey, 1951, Journ. Washington Acad. Sci., 41: 80, figs. 10-13. ♂ HT (formerly ANSP, lost in postal delivery), from Tuscaloosa, Tuscaloosa Co., Alabama.

Cleidogona minutissima (Kraus)

Hirsutogona minutissima Kraus, 1954, Senckenberg. Biol. 35: 332, figs. 66-71. ♂ HT (SMF) from Laguna de las Ranas, Dept. Sonosante, El Salvador.

Cleidogona minutissima: Shear, 1972, Bull. Mus. Comp. Zool., 144: 222, figs. 284-285.

Cleidogona mirabilis (Kraus)

Hirsutogona mirabilis Kraus, 1954, Senckenberg. Biol., 35: 329, figs. 62-65. ♂ HT (SMF) from Monte Cristo, Metapan Mountains, Dept. Santa Ana, El Salvador.

Cleidogona mississippiana Chamberlin

Cleidogona mississippiana Chamberlin, 1942, Bull. Univ. Utah, 32(8): 3, figs. 4-6. ♂ HT (USNM) from eight miles east of Vicksburg, Warren Co., Mississippi. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 235, fig. 368.

Range: Forest, Rankin, and Warren cos., in southern Mississippi.

Cleidogona mixteca Shear

Cleidogona mixteca Shear, 1972, Bull. Mus. Comp. Zool., 144: 211, figs. 209-212. ♂ HT (MCZ) from 54.1 miles south of Valle Nacional, 8300 ft., Oaxaca.

Cleidogona moderata Causey

Cleidogona moderata Causey, 1957, Journ. Kansas Entom. Soc., 30: 115, figs. 6, 7. Location of ♂ HT unknown, not at AMNH, from 18 miles south of Tamazunchale, San Luis Potosí, Mexico.

Cleidogona nantahala Shear

Cleidogona nantahala Shear, 1972, Bull. Mus. Comp. Zool., 144: 227, figs. 301-306. ♂ HT (MCZ) from Mount Pisgah, 5000 ft., Haywood Co., North Carolina.

Range: Western North Carolina: Haywood, Macon, Swain, Transylvania cos. (Shear, 1972, map 13).

Cleidogona nueva nueva Chamberlin, new status

Cleidogona nueva Chamberlin, 1941, Ent. News, 52: 251, figs. 1,2. ♂ HT (USNM) from Ojo de Agua, Sabinas Hidalgo, Nuevo Leon, Mexico.

Until the status of the following entry has been determined, the nominate taxon should be given parallel rank.

Cleidogona nueva michoacana Chamberlin

Cleidogona nueva "variety" michoacana Chamberlin, 1941, Ent. News, 52: 252, figs. 3, 4. ♂ HT (?USNM) from Tancítaro, Michoacan, Mexico.

This name, proposed as of varietal status, was treated by Shear (1972: 159) as a supposed subspecies of uncertain status. Although Chamberlin stated that the gonopods were very similar to those of the nominate *nueva*, the difference in type localities suggests that *michoacana* be listed as a possibly distinct form pending examination of new topotypic material.

Cleidogona pecki Shear

Cleidogona pecki Shear, 1972, Bull. Mus. Comp. Zool., 144: 213, figs.221-225. ♂ HT (MCZ) from Cueva de la Mina, six miles northwest of Gómez Farias, Tamaulipas.

Cleidogona pochteca Shear

Cleidogona pochteca Shear, 1986, Texas Mem. Mus. Speleol. Monogr., 1: 73, figs. 25-27. ♂ HT (AMNH) from Sótano de la Torre, four km southeast of Ranch Nuevo firetower, Tamaulipas.

Cleidogona punctifer Chamberlin

Cleidogona punctifer Chamberlin, 1952, Great Basin Nat., 12: 13. ♀ HT (FMNH), from Chichivac, near Tecpan, Dept. Chimaltenango, Guatemala.

Cleidogona rafaela Chamberlin

Cleidogona rafaela Chamberlin, 1943, Bull. Univ. Utah, 34(7): 35, figs. 73-75. ♂ HT (USNM) from "San Rafael, D. F." – Shear, 1972, Bull. Mus. Comp. Zool., 144: 218, figs. 260-262.

Shear could locate no San Rafael in the Distrito Federal, and suggested that San Rafael in Edo Mexico is possibly the correct type locality.

Cleidogona revilla Shear

Cleidogona revilla Shear, 1986, Texas Mem. Mus. Speleol. Monogr. 1: 75, figs. 28-30. ♂ HT (AMNH) from three km southeast of Revilla, Tamaulipas, Mexico.

Cleidogona saripa Causey

Cleidogona saripa Causey, 1961, Florida Entom., 44: 36, figs. 1, 2. ♂ HT (?lost, not at AMNH), from the Savannah River Plant, Aiken Co., South Carolina.

Cleidogona scandens Hoffman

Cleidogona scandens Hoffman, 1975, Pan-Pacific Entom., 51: 33, figs. 1-7. ♂ HT (CAS) from 17 km southeast of San Cristobal de las Casas, Chiapas, Mexico.

Cleidogona secreta Causey

Cleidogona secreta Causey, 1957, Journ. Kansas Ent. Soc., 30: 119, fig. 16. ♀ HT (lost?, not at AMNH) from Cuidad Oaxaca, Oaxaca, Mexico.

Cleidogona sayana (Bollman)

Julus punctatus Say, 1821, Journ. Acad. Nat. Sci. Philadelphia, 2: 102. Type material not known to exist, from unspecified locality (considered by Chamberlin & Hoffman, 1958: 124, to be probably the vicinity of Philadelphia). Preoccupied by *Julus punctatus* Leach, 1815.

Julus stigmatosus Brandt, 1840, Bull. sci. Acad. Imp. Sci. St.-Pétersbourg, 8: 103. Replacement name for *Julus punctatus* Say; preoccupied by *Julus stigmatosus* Eichwald, 1830.

[**Not** *Nemasoma stigmatosum*: Bollman, 1888, Proc. U. S. Nat. Mus., 11: 405!]

Nemasoma sayanum Bollman, 1893, Bull. U. S. Nat. Mus., 46: 145. Replacement name for *Julus punctatus* Say (and *J. stigmatosus* Brandt). – Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 124.

Cleidogona sayana: Hoffman, 1999, Myriapodologica, 6: 24.

I have shown (op. cit.) that Say's description of his *punctatus* is precise and could have been derived only from a specimen of *Cleidogona.* If Philadelphia is arbitrarily but plausibly accepted as a type locality, this name is quite possibly a senior synonym of *C. major* (Cook & Collins, 1895). However, a formal association of these two names should be preceeded by a search for topotypic material, from which a neotype can be selected to stabilize the identity of the name.

Cleidogona steno Shear

Cleidogona steno Shear, 1972, Bull. Mus. Comp. Zool., 144: 232, figs. 344-348. ♂ HT (MCZ) from Burnt Mountain, Pickens Co., Georgia.

Cleidogona stolli Pocock

Cleidogona stolli Pocock, 1903, Biol. Centr.-Amer., Diplopoda, p. 52, pl. 5, figs.7a-e. ♂ HT (BMNH) fromVolcán de Agua, Dept. Sacatepequez, Guatemala. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 220, figs. 275-277.

Cleidogona sublettei Causey

Cleidogona sublettei Causey, 1954, Tulane Stud. Zool., 2: 66, figs. 4, 5. ♂ HT (?lost, not at AMNH). – Shear, 1972, Bull. Mus. Comp. Zool., 144: 235, figs. 370-373.

Cleidogona tajumulco Chamberlin

Cleidogona tajumulco Chamberlin, 1952, Great Basin Nat., 12: 15. ♀ HT (FMNH?) from Volcán Tajumulco, Dept. San Marcos, Guatemala.

Cleidogona tallapoosa Shear

Cleidogona tallapoosa Shear, 1972, Bull. Mus. Comp. Zool., 144: 231, figs. 332-334. ♂ HT (MCZ) from four miles south of Perryville, Tallapoosa Co., Alabama.

Range: Also recorded from Cherokee Co., North Carolina, by Shelley (1976)

Cleidogona tequila Shear

Cleidogona tequila Shear, 1972, Bull. Mus. Comp. Zool., 144: 217, figs. 249-252. ♂ HT (MCZ) from Tequila (18.44 N, 97.04 W), Veracruz, Mexico.

Cleidogona tizoc Shear

Cleidogona tizoc Shear, 1972, Bull. Mus. Comp. Zool., 144: 214, figs. 229-231. ♂ HT (MCZ) from Delina, Pinal de Amoles, Querétaro, Mexico.

Cleidogona totonaca Shear

Cleidogona totonaca Shear, 1972, Bull. Mus. Comp. Zool., 144: 218, figs. 257-259. ♂ HT (MCZ) from 17.8 miles east of Landa de Matamoros, Querétaro, Mexico.

Range: Also recorded from Sótano de las Calenduras at Yerbabuena, Tamaulipas, and Sótano del Gobernador near Pinal de Amoles, Querétero, Mexico.

Cleidogona treacyae Shear, 1982, Texas Mem. Mus. Bull. 28: 151, figs. 15-17. ♂ HT (AMNH) from Cueva de los Viet Cong, Xilitla Plateau, San Luis Potosí.

Cleidogona unita Causey

Cleidogona unita Causey, 1951, Journ. Washington Acad. Sci., 41: 78, figs. 5-9. ♂ HT (INHS) from Giant City State Park, Union Co., Illinois. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 238, figs. 388-392.

Range: Recorded from Union, Jackson, Pope cos., southern Illinois, and Edmonson Co., Kentucky.

Cleidogona wrayi Causey

Cleidogona wrayi Causey, 1957, Journ. Kansas Ent. Soc., 30: 114, figs. 1-3. ♂ HT (AMNH) from Acre, Beaufort Co., North Carolina. – Shear, 1972, Bull. Mus. Comp. Zool. 144: 234, figs. 359-361.

Cleidogona xolotl Shear

Cleidogona xolotl Shear, 1972, Bull. Mus. Comp. Zool., 144: 215, figs. 242, 243. ♂ HT (MCZ) from 23.8 miles northeast of Jacala, 5100 ft., Hidalgo, Mexico.

Cleidogona yerbabuena Shear

Cleidogona yerbabuena Shear, 1982, Texas Mem. Mus. Bull. 28: 151, figs. 18-20. ♂ HT (AMNH) from Sótano de las Calenturas, Yerbabuena, Tamaulipas, Mexico..

Cleidogona zapoteca Shear

Cleidogona zapoteca Shear, 1972, Bull. Mus. Comp. Zool., 144: 219, figs. 263-265. ♂ HT (MCZ) from San Pedro Juchatengo near Pinotepa National Park, Oaxaca.

Cleidogona zempoala Chamberlin

Cleidogona zempoala Chamberlin, 1943, Bull. Univ. Utah, 34(7): 35, figs. 64, 65. ♂ HT(?USNM, lost?) from Parque Nacional de Zempoala, Morelos, Mexico.

Cleidogona zimapaniensis Causey

Cleidogona zimapaniensis Causey, 1957, Journ. Kansas Ent. Soc., 30: 117, figs. 9-12. ♂ HT (AMNH) from 14 miles north of Zimapan, Hidalgo, Mexico. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 214, figs. 232-235.

Genus **Dybasia** Loomis

Dybasia Loomis, 1964, Fieldiana: Zool., 47: 100. Type species. *D. humerosa* Loomis, by original designation.

Ogkomus Loomis, 1964, Fieldiana: Zool., 47: 102. Type species, *O. divergens* Loomis, by original designation. Synonymized by Shear, 1972.

Solemia Loomis, 1964, Fieldiana: Zool., 47: 104. Type species: *S. chiriquia* Loomis, by original designation. Synonymized by Shear, 1972.

Four species. Western Panama (Shear, 1972, map 14) and adjacent Costa Rica.

Dybasia chiriquia (Loomis)

Solemia chiriquia Loomis, 1964, Fieldiana: Zool., 47: 105, figs. 10M-P. ♂ HT (FMNH) from Finca Lerida. Near Boquete, Prov. Chiriquí, Panama.

Dybasia chiriquia: Shear, 1972, Bull. Mus. Comp. Zool., 144: 246, figs. 422-424.

Dybasia divergens (Loomis)

Ogkomus divergens Loomis, 1964, Fieldiana: Zool., 47: 102, figs. 10J-L. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panama.

Dybasia divergens: Shear, 1972, Bull. Mus. Comp. Zool., 144: 245, figs. 419-421.

Dybasia humerosa Loomis

Dybasia humerosa Loomis, 1964, Fieldiana: Zool., 47: 101, figs. 10A-I. ♂ HT (FMNH) from Finca Lerida, near Boquete, Prov. Chiriquí, Panama.

Dybasia interamericana Loomis

Dybasia interamericana Loomis, 1975, Florida Entom. 57: 184, figs. 25, 26. ♂ HT (FSCA) from south side of Cerro de la Muerte, on the Interamerican Highway, Prov. San Jose, Costa Rica.

Genus **Pseudotremia** Cope

Pseudotremia Cope, 1869, Proc. American Philos. Soc., 11: 179. Type species: *P. cavernarum* Cope, by monotypy. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 162 (revision).

Dearolfia Loomis, 1939, Bull. Mus. Comp. Zool., 86: 177. Type species: *D. lusciosa* Loomis, by orighinal designation. Synonymized by Shear, 1972.

37 species, central eastern United States (Shear, 1972, map 5).

Pseudotremia acheron Shear

Pseudotremia acheron Shear, 1972, Bull. Mus. Comp. Zool., 144: 176, figs. 49-52. ♂ HT (MCZ) from Higgenbotham Cave, eight miles south of McMinnville, Warren Co., Tennessee

Range: Also recorded from McElroy Cave near Boone Cave P. O., Van Buren Co., Tennessee.

Pseudotremia aeacus Shear

Pseudotremia aeacus Shear, 1972, Bull. Mus. Comp. Zool., 144: 178, figs. 66-69. ♂ HT (MCZ) from Hurricane Cave near Rising Fawn, Dade Co., Georgia.

Pseudotremia alecto Shear

Pseudotremia alecto Shear, 1972, Bull. Mus. Comp. Zool. 144: 186, figs. 122-124. ♂ HT (MCZ) from Coleman's Pond at "Griffith" [ca. five miles east of Clifton Forge on the CSX railroad], Alleghany Co., Virginia.

Pseudotremia armesi Shear

Pseudotremia armesi Shear, 1972, Bull. Mus. Comp. Zool., 144: 185, figs. 118-121. ♂ HT (MCZ) from Neely Farm Cave near Athens, Mercer Co., West Virginia.

Pseudotremia amphiorax Shear

Pseudotremia amphiorax Shear, 1972, Bull. Mus. Comp. Zool., 144: 172, figs.13-16. ♂ HT (MCZ) from Sig Shacklett's Cave, three miles north of Big Spring, Meade Co., Indiana.

Pseudotremia carterensis Packard

Pseudotremia cavernarum carterensis Packard, 1883, Proc. American Philos. Soc., 21: 186. ST (MCZ) from Bat Cave, Carter's Cave, Zwingel's Cave, and X Cave, Carter Co., Kentucky.

Pseudotremia carterensis: Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 40, figs. 8-10. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 188, figs. 141-144.

Pseudotremia sodalis Loomis, 1939, Bull. Mus. Comp. Zool. 86: 173, figs. 4a-d. ♂ HT (MCZ) from Bat Cave, Carter Co., Kentucky. Synonymized by Shear, 1972.

Range: Known only from Carter Co., Kentucky. The record for Wyandotte Cave, Indiana by Cook & Collins (1895) is presumed to be based on mislabeled material.

Pseudotremia cavernarum Cope

Pseudotremia cavernarum Cope, 1869, Proc. American Philos, Soc., 11: 179. Type material unknown, probably not extant, from Erhardt's Cave, at Ellett, Montgomery Co., Virginia. – Hoffman, 1958, Proc. Biol. Soc. Washington, 71: 113, figs. 1, 2. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 191, figs. 157-160..

Range: Known only from several caves in the Ellett Valley, east of Blacksburg, Virginia. The type locality itself has been destroyed by quarrying operations.

Pseudotremia cercops Shear

Pseudotremia cercops Shear, 1972, Bull. Mus. Comp. Zool., 144: 180, figs. 81-84. ♂ HT (MCZ) from Jim Cave, 3.5 miles east of Dowelltown, DeKalb Co., Tennessee.

Pseudotremia cocytus Shear

Pseudotremia cocytus Shear, 1972, Bull. Mus. Comp. Zool., 144: 183, figs. 98-100. ♂ HT (MCZ) from 1.4 miles east of Dossett, Anderson Co., Tennessee.

Range: Recorded from several caves in Anderson Co., Tennessee.

Pseudotremia conservata Hoffman & Lewis

Pseudotremia conservata Hoffman & Lewis, 1997, Myriapodologica, 4: 108, figs. 1-6. ♂ HT (VMNH) from Seven Springs Cave, 0.7 miles NNW of Elizabeth, Harrison Co., Indiana.

Pseudotremia deprehendor Shear

Pseudotremia deprehendor Shear, 1972, Bull. Mus. Comp. Zool. 144: 189, figs. 145-147. ♂ HT (MCZ) from Feather's Cave, 4 miles east of Clinton, Anderson Co., Tennessee.

Pseudotremia eburnea Loomis

Pseudotremia eburnea Loomis, 1939, Bull. Mus. Comp. Zool., 86: 174, figs. 5a-c. ♂ HT (MCZ) from "Cricket Cave" at Rising Fawn, Dade Co., Georgia. – Shear, 1972, Bull. Mus. Comp. Zool. 144: 177, figs. 63-65.

Range: Caves in northwestern Georgia (Dade Co.) and adjacent Tennessee (Marion Co.)

Pseudotremia fracta fracta Chamberlin

Pseudotremia fracta Chamberlin, 1951, Great Basin Natur., 11: 25. ♀ HT (USNM) from Gatlinburg, Sevier Co., Tennessee.

Pseudotremia cottus Shear, 1972, Bull. Mus. Comp. Zool., 144: 183, figs. 101-109. ♂ HT (MCZ) from "The Sinks", Cades Cove, Blount Co., Tennessee.

Pseudotremia fracta fracta Hoffman, 1981, Brimleyana 5: 138, figs. 1, 5.

Range: Several localities in the Great Smoky Mountains, Blount and Sevier cos., Tennessee (Hoffman, 1981, fig. 9).

Pseudotremia fracta ingens Hoffman

Pseudotremia fracta ingens Hoffman, 1981, Brimleyana 5: 141, figs. 3, 5. ♂ HT (VMNH) from New Mammoth Cave, ca. 11 miles NW of LaFolette, Campbell Co., Tennessee.

Pseudotremia fracta nantahala Hoffman

Pseudotremia fracta nantahala Hoffman, 1981, Brimleyana 5: 143, figs. 4, 8. ♂ HT (USNM) from Blowing Springs Cave near Nantahala, Swain Co., North Carolina.

Pseudotremia fracta paynei Hoffman

Pseudotremia fracta paynei Hoffman, 1981, Brimleyana 5: 139, figs. 2, 6. ♂ HT (VMNH) from Norris Quarry Cave no. 1, one mile north of Andersonville, Anderson Co., Tennessee.

Pseudotremia fulgida Loomis

Pseudotremia fulgida Loomis, 1943, Bull. Mus. Comp. Zool., 92: 378, figs. 3a-d. ♂ HT (MCZ) from Higgenbotham Cave, 1.5 miles NW of Frankfort, Greenbrier Co., West Virginia. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 188, figs. 135-140.

Range: Recorded from several caves in Greenbrier Co., West Virginia.

Pseudotremia hansoni Chamberlin

Pseudotremia hansoni Chamberlin, 1951, Great Basin Nat., 11: 25. ♂ HT (USNM) from Pineville, Bell Co., Kentucky.

Pseudotremia hobbsi Hoffman

Pseudotremia hobbsi Hoffman, 1950, Journ. Washington Acad. Sci., 40: 90, figs. 5, 6. ♂ HT (USNM) from Chestnut Ridge Cave, ca. 2 miles north of Clifton Forge, Alleghany Co., Virginia. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 191, figs. 1-5, 161-167.

Range: Numerous caves and surface sites in Alleghany, Botetourt, Craig, and Montgomery cos., Virginia, and Greenbrier and Monroe cos., West Virginia (Shear, 1972, map 8).

Pseudotremia indianae Hoffman

Pseudotremia cavernarum: Cook & Collins, 1895, Ann. New York Acad. Sci. 9: 36, figs. 2-7. Misidentification.

Pseudotremia indianae Hoffman, 1958, Proc. Biol. Soc. Washington, 71: 114 (July). New name for *Pseudotremia cavernarum* sensu Cook & Collins, 1895, nec Cope, 1869. Type material (formerly USNM, now lost), from Wyandotte Cave, Crawford Co., Indiana. – Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 95 (September). – Shear, 1972, Bull. Mus. Comp. Zool., 144: 172, figs. 17-24. – Hoffman & Lewis, 1997, Myriapodologica, 4: 112.

Range: Caves in the Blue River basin, southern Indiana (Hoffman & Lewis, 1997, fig. 7).

Pseudotremia lethe Shear

Pseudotremia lethe Shear, 1972, Bull. Mus. Comp. Zool., 144: 179, figs. 78-80. ♂ HT (MCZ) from Carter Cave, 3.3 miles SW of Flynn's Lick, Jackson Co., Tennessee.

Pseudotremia lictor Shear

Pseudotremia lictor Shear, 1972, Bull. Mus. Comp. Zool. 144: 181, figs. 85-88. ♂ HT (MCZ) from Avant Cave, 2 miles east of Dowelltown, DeKalb Co., Tennessee.

Pseudotremia lusciosa (Loomis)

Dearolfia lusciosa Loomis, 1939, Bull. Mus. Comp. Zool., 86: 178, figs. 7a-f. ♂ HT (MCZ) from Seneca Caverns, 3 miles NE of Riverton, Pendleton Co., West Virginia.

Pseudotremia lusciosa: Shear, 1972, Bull. Mus. Comp. Zool., 144: 187, figs. 125-127..

Pseudotremia merops Shear

Pseudotremia merops Shear, 1972, Bul. Mus. Comp. Zool., 144: 175, figs. 31-35. ♂ HT (MCZ) from one mile NE of Breeding, Adair Co., Kentucky.

Pseudotremia minos Shear

Pseudotremia minos Shear, 1972, Bull. Mus. Comp. Zool., 144: 182, figs. 93-97. ♂ HT (MCZ) from Russell Cave, Jackson Co., Alabama.

Pseudotremia momus Shear

Pseudotremia momus Shear, 1972, Bull. Mus. Comp. Zool., 144: 185, figs. 114-117. ♂ HT (MCZ) from Spence Cave, between Saltville and Chatham, Smyth Co., Virginia.

Range: Also recorded from crest of Big Walker Mountain, 4 miles south of Ceres, Bland Co., Virginia.

Pseudotremia nefanda Shear

Pseudotremia nefanda Shear, 1972, Bull. Mus. Comp. Zool., 144: 171, figs. 8-12. ♂ HT (MCZ) from Indian Cave, 0.7 miles west of Charlestown, Clark Co., Indiana. – Hoffman & Lewis, 1997, Myriapodologica, 4: 112.

Range: Caves in Clark Co., Indiana (Hoffman & Lewis, 1997, fig. 7).

Pseudotremia nodosa Loomis

Pseudotremia nodosa Loomis, 1939, Bull. Mus. Comp. Zool., 86: 175, figs. 6a-d. ♂ HT (MCZ) from English Cave, 0.9 miles south of Hamilton School on the Powell River, Claiborne Co.,Tennessee. – Shear, 1972, 178, figs. 70-73.

Range: Known from many caves in Claiborne and Hancock cos., Tennessee, and Lee Co., Virginia.

Pseudotremia nyx Shear

Pseudotremia nyx Shear, 1972, Bull. Mus. Comp. Zool., 144: 179, figs. 74-77. ♂ HT (MCZ) from Cathedral Caverns, 3.5 miles north of Grant, Marshall Co., Alabama.

Pseudotremia princeps Loomis

Pseudotremia princeps Loomis, 1939, Bull. Mus. Comp. Zool., 86: 168, figs. 1a-c. ♂ HT (MCZ) from "Eagle Cave, West Virginia" an unverifiable and doubtless incorrect locality. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 190, figs. 148-151.

Range: Recorded from several caves in Pendleton Co., West Virginia.

Pseudotremia rhadamanthus Shear

Pseudotremia rhadamanthus Shear, 1972, Bull. Mus. Comp. Zool., 144: 176, figs. 53-57. ♂ HT (MCZ) from Terrill Cave, five miles NE of Guntersville, Marshall Co., Alabama.

Range: Also recorded from Monteagle Saltpeter Cave, Marion Co., Tennessee.

Pseudotremia scrutorum Shear

Pseudotremia scrutorum Shear, 1972, Bull. Mus. Comp. Zool., 144: 181, figs. 89-92. ♂ HT (MCZ) from 1.7 miles north-northeast of Winfield, Scott Co., Tennessee.

Pseudotremia simulans Loomis

Pseudotremia simulans Loomis, 1939, Bull. Mus. Comp. Zool. 86: 170, figs. 2a-b. ♂ HT (MCZ) from Simmons Cave, near Cave P. O., Pendleton Co., West Virginia. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 187, figs. 128-134.

Pseudotremia soco Shear

Pseudotremia soco Shear, 1972, Bull. Mus. Comp. Zool., 144: 177, figs. 58-62. ♂ HT (MCZ) from Soco Gap Falls, Jackson Co., North Carolina.

Range: Also known from the north side of Mount Mitchell, NC Rt. 197, Buncombe Co., North Carolina.

Pseudotremia spira Shear

Pseudotremia spira Shear, 1972, Bull. Mus. Comp. Zool., 144: 175, figs. 44-48. ♂ HT (MCZ) from Wind Cave, five miles southeast of Somerset, Pulaski Co., Kentucky.

Pseudotremia stupefactor Shear

Pseudotremia stupefactor Shear, 1972, Bull. Mus. Comp. Zool. 144: 174, figs. 27-30. ♂ HT (MCZ) from cedar woods at Camp Nelson, Jessamine Co., Kentucky.

Pseudotremia sublevis Loomis

Pseudotremia sublevis Loomis, 1944, Psyche, 51: 167, figs. 1A-C. ♂ HT (MCZ) from "Tony's" [=Tawney's] Cave, 1.5 miles northwest of Newport on Va. Rte. 604, Giles Co., Virginia. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 192, figs. 168-172.

Range: Caves and surface sites in Giles and Montgomery cos., Virginia.

Incorrectly synonymized with *P. cavernarum* by Chamberlin & Hoffman, 1958.

Pseudotremia tsuga Shear

Pseudotremia tsuga Shear, 1972, Bull. Mus. Comp. Zool., 144: 190, figs. 152-156. ♂ HT (MCZ) from Cranberry Glades Natural Area, west of Mill Point, Pocahontas Co., West Virginia.

Range: Two surface sites in Pocahontas Co., West Virginia..

Pseudotremia tuberculata Loomis

Pseudotremia tuberculata Loomis, 1939, Bull. Mus. Comp. Zool., 86: 171, figs. 3a-b. ♂ HT (MCZ) from Cassell Farm Cave, Burkes Garden, Tazewell Co., Virginia. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 184, figs. 110-113.

Pseudotremia unca Shear

Pseudotremia unca Shear, 1972, Bull. Mus. Comp. Zool. 144: 175, figs. 36-43. ♂ HT (MCZ) from Great Saltpetre Cave, 4.6 miles north of Livingston, Rockcastle Co., Kentucky.

Pseudotremia valga Loomis

Pseudotremia valga Loomis, 1943, Bull. Mus. Comp. Zool., 92: 377, figs. 2a-c. ♂ HT (MCZ) from "King Solomon's Cave" (a.k.a. Cudjo's Cave, Cumberland Gap, Lee Co., Virginia). – Shear, 1972, Bull.Mus. Comp. Zool. 144: 173, figs. 24-26.

Genus **Solaenogona** Hoffman

Solaenogona Hoffman, 1950, Journ. Washington Acad. Sci., 40: 91. Type species: *S. guatemalana* Hoffman, by original designation. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 193.

Two species, Guatemala and Chiapas, Mexico.

Solaenogona chiapas Shear

Solaenogona chiapas Shear, 1972, Bull. Mus. Comp. Zool., 144: 195, figs. 177-180. ♂ HT (MCZ) from 33.7 miles north of Huixtla, Chiapas, Mexico.

Solaenogona guatemalana Hoffman

Solaenogona guatemalana Hoffman, 1950, Journ. Washington Acad. Sci., 40: 91, figs. 1-4. ♂ HT (USNM) from site between Santa Cruz del Quiché and Totonicapán, Dept. Chimaltenango, Guatemala.– Shear, 1972, Bull. Mus. Comp. Zool., 144: 194, figs. 173-176.

Genus **Tiganogona** Chamberlin

Bactropus Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 53. Type species: *B. conifer* Cook & Collins, by monotypy. Preoccupied by *Bactropus* Barrande, 1872.

Tiganogona Chamberlin, 1928, Ent. News, 39: 154. Type species: *T. brownae* Chamberlin, by original designation.– Shear, 1972, Bull. Mus. Comp. Zool., 144: 240.

Ofcookogona Causey, 1951, Proc. Biol. Soc. Washington, 64: 120. Type species: *O. steuartae* Causey, by original designation. Synonymized by Shear, 1972..

Ozarkogona Causey, 1951, Journ. Washington Acad. Sci., 41: 82. Type species: *O. glebosa* Causey, by original designation. Synonymized by Shear, 1972.

Bactropodellus Jeekel, 1969, Ent. Bericht. 29: 88. Replacement name for *Bactropus* Cook & Collins. Synonymized by Shear, 1972.

Eight species, Central United States (Shear, 1972, map 10).

Tiganogona alia (Causey)

Ofcookogona alia Causey, 1951, Proc. Biol. Soc. Washington, 64: 121, figs. 14-16. ♂ HT (formerly ANSP, lost in postal transit), from Junction City, Union Co., Arkansas.

Tiganogona alia: Shear, 1972, Bull. Mus. Comp. Zool., 144: 242, figs. 410, 411.

Range: Also recorded from Washington Co., Arkansas, and Lincoln Par., Louisiana.

Tiganogona brownae Chamberlin

Tiganogona brownae Chamberlin, 1928, Ent. News, 39: 154. ♂ HT (USNM) from St. Charles, St. Louis Co., Missouri. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 241, figs. 401-405.

Tiganogona conifer (Cook & Collins)

Bactropus conifer Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 54, figs. 172-176. Type material (not located), from Bloomington, Monroe Co., Indiana.

Bactropodellus conifer: Jeekel, 1969, Ent. Bericht. 29: 88.

Tiganogona conifer: Shear, 1972, Bull. Mus. Comp. Zool., 144: 158.

Tiganogona glebosa (Causey)

Ozarkogona glebosa Causey, 1951, Journ. Washington Acad. Sci. 41: 82, figs. 20, 21. ♂ HT (formerly ANSP, lost in postal transit), from Fayetteville, Washington Co., Arkansas.

Tiganogona glebosa: Shear, 1972, Bull. Mus. Comp. Zool., 144: 242, figs. 412-414.

Tiganogona ladymani (Causey)

Ozarkogona ladymani Causey, 1952, Proc. Biol. Soc. Washington, 65: 114, figs. 8, 9. ♂ HT (not at AMNH, location unknown), from Rector, Clay Co., Arkansas.

Tiganogona ladymani: Shear, 1972, Bull. Mus. Comp. Zool., 144: 158.

Tiganogona levis (Causey)

Ozarkogona levis Causey, 1959, Journ. Kansas Ent. Soc., 32: 143, figs. 1, 3. ♂ HT (not at AMNH, location unknown), from Richmond Creek, Greene Co., Indiana.

Tiganogona levis: Shear, 1972, Bull. Mus. Comp. Zool., 144: 158 (considered by Shear as probably a synonym of *T. conifer* Cook & Collins).

Tiganogona moesta (Causey)

Tiganogona moesta Causey, 1951, Journ. Washington Acad. Sci., 41: 82, figs. 22, 23. ♂ HT (not at ANSP, lost in postal transit), from Blue Spring, Carroll Co., Arkansas.

Range: Also recorded from Washington Co., Arkansas.

Tiganogona steuartae (Causey)

Ofcookogona steuartae Causey, 1951, Proc. Biol. Soc. Washington, 64: 121, figs. 13. ♂ HT (formerly ANSP, lost in postal transit), from Greenwood, Sebastian Co., Arkansas.

Family Trichopetalidae Verhoeff

Trichopetalinae Verhoeff, 1914, Zool. Anz., 43: 347.

Trichopetalidae Verhoeff, 1932, Zool. Jahrb. Abt. Syst. 62: 485. - Hoffman, 1961, Trans. American Ent. Soc., 87: 262 - Shear, 1972, Bull. Mus. Comp. Zool. 144: 274 (synopsis).

Four genera, Transcontinental North America: northeastern United States and adjacent Canadian provinces; Cordilleran ranges of western United States and Mexico (Shear, 1972, map 18).

Genus **Mexiterpes** Causey

Mexiterpes Causey, 1963, Psyche, 70: 235. Type species: *M. sabinus* Causey, by original designation. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 280.

Poterpes Causey, 1969, Proc. Louisiana Acad. Sci., 32: 46. Type species: *P. egeo* Causey, by original designation. Synonymized by Shear, 1974.

Seven species, northeastern Mexico (Tamaulipas to Guerrero) in caves.

Apparently Causey contrived this generic name as a derivative of *Scoterpes* (Cope, 1872), which is a compound of the two Greek words *skotos* + *herpes* (literally, crawler in the dark). However, the "t" in *Mexiterpes* is miscarried from *skotos* and should not have been united with *herpes* (or its combining form lacking the initial "h"). *Mexiherpes* would have been more nearly correctly formed.

Mexiterpes calenturas Shear

Mexiterpes calenturas Shear, 1982, Bull.Texas Mem. Mus., 28: 153, figs. 30-33. ♂ HT (AMNH) from Sótano de las Calenturas, Entrada del Blazer Section, at Yerbabuena, Tamaulipas, Mexico.

Range: Recorded from a number of caves in Tamaulipas.

Mexiterpes egeo (Causey)

Poterpes egeo Causey, 1969, Proc. Louisiana Acad. Sci., 32: 46, figs. 5, 7-10. ♂ HT (MCZ) from Cueva de el Puente, 13 miles south of San Francisco,San Luis Potosí, Mexico.

Mexiterpes egeo: Shear, 1974, Acc. Naz. Lincei, Prob. Att. Sci. Cult. 171: 256.

Mexiterpes fishi (Causey)

Poterpes fishi Causey, 1969, Proc. Louisiana Acad. Sci., 32: 47, figs. 6, 11-16. ♂ HT (MCZ) from Cueva de la Luz, 20 miles west of Aquismon, San Luis Potosí, Mexico.

Mexiterpes fishi: Shear, 1974, Acc. Naz. Lincei, Prob. Att. Sci. Cult. 171: 255 (combination implied by generic synonymy); 1982, Bull. Texas Mem. Mus. 28: 153 (record for Querétaro).

Mexiterpes metallicus Shear

Mexiterpes metallicus Shear, 1972, Bull. Mus. Comp. Zool. 144: 281, figs. 532-538. ♂ HT (MCZ) from roadside iron mine, 1.2 miles east of Pinal de Amoles, Querétaro, Mexico.

Range: Recorded from several caves in Querétaro, Mexico.

Mexiterpes nogal Shear

Mexiterpes nogal Shear, 1982, Bull. Texas Mem. Mus., 28: 153, figs. 34-38. ♂ HT (AMNH) from Sótano de Nogal, Querétaro, Mexico.

Mexiterpes sabinus Causey

Mexiterpes sabinus Causey, 1963, Psyche, 70: 235, figs. 1-3. ♂ HT (MCZ) from Sótano del Arroyo, eight miles north of Valles, San Luis Potosí, Mexico.

Mexiterpes sangregario Shear

Mexiterpes sangregario Shear, 1986, Texas Mem. Mus. Speleol. Monogr. 1: 72, figs. 19, 20. ♂ HT (AMNH) from Resumidero de la Joya San Gregario, Guerrero, Mexico.

Genus **Scoterpes** Cope

Scoterpes Cope, 1872, American Natur., 6: 414. Type species: *S. copei* Packard, by original designation. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 279.

Four species, Central United States, in caves (Georgia, Tennessee, Alabama, Kentucky, Illinois, Missouri).

Scoterpes austrinus Loomis.

Scoterpes austrinus Loomis, 1943, Bull. Mus. Comp. Zool., 92: 386, fig. 6. ♂ HT (MCZ) from Manitou Cave, one mile south of Fort Payne, DeKalb Co., Alabama.– Shear, 1972, Bull. Mus. Comp. Zool., 144: 279, figs. 518-520.

Scoterpes austrinus nudus Chamberlin, 1943, Ent. News, 57: 152. ♂ HT (?USNM) from Saltpeter Cave, four miles south of Kingston, Bartow Co., Georgia. New synonymy!

Shear's examination of typical *austrinus* from a cave in Floyd Co., Georgia, adjacent to Bartow Co., makes it almost certain that the name *nudus* is invalid.

Scoterpes copei (Packard)

Spirostrephon (Pseudotremia) copei Packard, 1881, American Natur., 5: 748. ♂ HT (MCZ) from Poynter's Cave, Mammoth Cave system, Edmondson Co., Kentucky.

Scoterpes copei: Cope, 1872, American Natur., 6: 414. – Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 55, figs. 12, 13. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 279, figs. 516, 517.

Scoterpes dendropus Loomis

Scoterpes dendropus Loomis, 1939, Bull. Mus. Comp. Zool., 86: 181, figs. 9a-c. ♂ HT (MCZ) from Marvel Cave, Stone Co., Missouri.

Range: Caves in Missouri.

Scoterpes ventus Shear

Scoterpes ventus Shear, 1972, Bull. Mus. Comp. Zool., 144: 279, figs. 521-526. ♂ HT (MCZ) rom Blowing Cave, Sequatchie, Marion Co., Tennessee.

Genus **Trichopetalum** Harger

Trichopetalum Harger, 1872, American Journ. Arts & Sci., 4: 117. Type species: *T. lunatum* Harger, by subsequent designation of Cook & Collins, 1895. – Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 62. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 277 (synopsis).

Zygonopus Ryder, 1881, Proc. U. S. Nat. Mus., 3: 527. Type species: *Z. whitei* Ryder, by monotypy. Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 59. – Causey, 1960, Journ. New York Ent. Soc., 67: 70. Synonymized by Shear, 1972.

Tynopus Chamberlin, 1940, Canadian Entom., 72: 57. Type species: *T. dux* Chamberlin, by original designation. Synonymized by Shear, 1972.

Flagellopetalum Causey, 1951, Proc. Biol. Soc. Washington, 64: 119. Type species: *F. stannardi* Causey, by original designation. Synonymized by Shear, 1972.

13 species, eastern North America south as far as Alabama.

Trichopetalum appropinquo (Causey)

Flagellopetalum appropinquo Causey, 1969, Proc. Louisiana Acad. Sci., 32: 44, figs. 1-4. ♂ HT (MCZ) from Rhoresville Caves, Washington Co., Maryland.

Trichopetalum appropinquo: Shear, 1972, Bull. Mus. Comp. Zool., 144: 277. New combination implicit by generic synonymy.

Trichopetalum cornutum Cook & Collins

Trichopetalum cornutum Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 66, figs. 46-49. ♂ HT (?USNM) from Bloonington, Monroe Co., Indiana. – Causey, 1967, Proc. Biol. Soc. Washington, 80: 119. – Shear, 1972, Bull. Mus. Comp. Zool. 144: 288, figs. 511-513.

Range: Michigan and Indiana, southeastward to western North Carolina.

Trichopetalum dux (Chamberlin)

Tynopus dux Chamberlin, 1940, Canadian Entom., 72: 57. ♂ HT (USNM) from Duke Forest, Durham Co., North Carolina.

Trichopetalum dux: Shear, 1972, Bull. Mus. Comp. Zool., 144: 278, figs. 502-504.

Trichopetalum krekeleri (Causey)

Zygonopus krekeleri Causey, 1960, Journ. New York Ent. Soc., 68: 79, figs. 10, 11. ♂ HT (?AMNH) from Alpena Cave no. 1, Alpena, Randolph Co., West Virginia.

Trichopetalum krekeleri: Shear, 1972, Bull. Mus. Comp. Zool. 144: 277. New combination implicit by generic synonymy.

Range: Caves in Randolph and Tucker cos., West Virginia.

Trichopetalum lunatum Harger

Trichopetalum lunatum Harger, 1872, American Journ. Arts & Sci., 4: 118. 0F ST (PMNH) from New Haven, New Haven Co., Connecticut. – Cook & Collins, 1895, Ann. New York Acad.

Sci. 9: 63, figs. 52-54. – Palmen, 1952, Ann. Soc. Zool. "Vanamo" 15: 8, figs. 10-19. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 277, figs. 497-499. – Shelley, 1993, Brimleyana 18: 4.

Trichopetalum album Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 64, figs. 22-29. Location of types in USNM not verified, from Syracuse, Onandaga Co., New York. Synonymized by Causey, 1969.

Range: Newfoundland to Wisconsin, south to Virginia and West Virginia.

Trichopetalum montis Chamberlin

Trichopetalum montis Chamberlin, 1951, Great Basin Natur., 11: 24, figs. 13, 214. ♂ HT (USNM) from Gatlinburg, Sevier Co., Tennessee.

Trichopetalum packardi (Causey)

Zygonopus packardi Causey, 1960, Journ. New York Acad. Sci., 68: 77, figs. 8, 9. ♂ HT (?AMNH) from Patton's Cave, Monroe Co., West Virginia..

Trichopetalum packardi: Shear, 1972, Bull. Mus. Comp. Zool., 144: 278, figs. 514, 515.

Range: Caves in Bland, Botetourt, Giles and Montgomery cos., Virginia, and Greenbrier, Mercer, and Monroe cos., West Virginia (Causey, 1960, fig. 1).

Trichopetalum quadratum (Loomis)

Flagellopetalum quadratum Loomis, 1966, Proc. Biol. Soc. Washington, 79: 229, figs. 17-19. ♂ HT (location unknown, not in USNM), from Glendale, Prince Georges Co., Maryland.

Trichopetalum quadratum: Shear, 1972, Bull. Mus. Comp. Zool., 144: 277. New combination implicit by generic synonymy.

Trichopetalum stannardi (Causey)

Flagellopetalum stannardi Causey, 1951, Proc. Biol. Soc. Washington, 64: 120, figs. 9-12. ♂ HT (location unknown, not in INHS), from Rocky Branch, Clark Co., Illinois.

Trichopetalum stannardi: Shear, 1972, Bull. Mus. Comp. Zool., 144: 277. New combination implicit by generic synonymy.

Trichopetalum subterraneum Causey

Trichopetalum subterraneum Causey, 1967, Proc. Biol. Soc. Washington, 80: 120, figs. 2-5. ♂ HT (USNM), from Slacks (Bryants) Cave, 15 miles NE of Lexington in Scott Co., Kentucky.

Trichopetalum syntheticum Shear

Trichopetalum syntheticum Shear. 1972, Bull. Mus. Comp. Zool. 144: 278, figs. 505-510. ♂ HT (MCZ) from Crossings Cave, 1.5 miles north of Paint Rock, Jackson Co., Alabama.

Trichopetalum uncum Cook & Collins

Trichopetalum uncum Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 66, fig. 51. ♂ HT (?USNM), from Bloomington, Monroe Co., Indiana. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 277, figs. 500, 501.

Range : Indiana and Kentucky, west to Missouri and Oklahoma.

Trichopetalum weyeriensis (Causey)

Zygonopus weyeriensis Causey, 1960, Journ. New York Ent. Soc., 68: 75, figs. 4-7. ♂ HT (?AMNH) from Grand Caverns *(olim* Weyer's Cave), Grottoes, Rockingham Co., Virginia.

Trichopetalum weyeriensis: Shear, 1972, Bull. Mus. Comp. Zool., 144: 277. New combination implicit by generic synonymy.

Range: Caves in Augusta and Bath cos., Virginia, and Greenbrier and Pendleton cos., West Virginia (Causey, 1960, fig. 1).

Trichopetalum whitei (Ryder)

Zygonopus whitei Ryder, 1881, Proc. U. S. Nat. Mus., 3: 527, figs. 1-3. Location of type material unverified, from Luray Caverns, Page Co., Virginia. – Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 60, figs. 14-21. – Causey, 1960, Journ. New York Ent. Soc., 68: 73, figs. 2, 3.

Trichopetalum whitei: Shear, 1972, Bull. Mus. Comp. Zool., 144: 277. New combination implicit by generic synonymy.

Range: Caves in Page and Shenandoah cos., Virginia, and Pendleton Co., West Virginia (Causey, 1960, fig. 1).

Genus **Trigenotyla** Causey

Trigenotyla Causey, 1951, Proc. Biol. Soc. Washington, 64: 118. Type species: *T. parca* Causey, by original designation.

One species, Arkansas.

Trigenotyla parca Causey

Trigenotyla parca Causey, 1951, Proc. Biol. Soc. Washington, 64: 118, figs. 1-5. ♂ HT (?INHS) from Blue Spring, Carroll Co., Arkansas. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 280, figs. 527, 528.

Range: Caves and surface sites in Carroll and Washington cos., Arkansas.

Superfamily Heterochordeumatoidea Pocock

Family Conotylidae Cook

Conotylidae Cook, 1896, Brandtia, 2: 8.– Verhoeff, 1932, Zool. Jahrb. Abt. Syst., 62: 500. – Shear, 1971, Bull. Mus. Comp. Zool. 141: 58 (revision); 1972, Bull. Mus. Comp. Zool., 144: 268 (update); 1976, American Mus. Nov. 2600: 4, 5 (update, key to genera).

Eight genera, North America; one, Japan.

Subfamily Austrotylinae Shear

Austrotylinae Shear, 1976, American Mus. Nov., 2600: 19.

Three genera, northcentral and western North America.

Genus **Achemenides** Shear

Achemenides Shear, 1971, Bull. Mus. Comp. Zool., 141: 84. Type species: *Conotyla pectinata* Causey, by original designation.

One species, Illinois, Iowa, Wisconsin.

Achemenides pectinatus (Causey)

Conotyla pectinata Causey, 1952, Proc. Biol. Soc. Washington, 65: 112, figs. 4, 5. ♂ HT (INHS) from Smith Park Cave, Mt. Carroll, Carroll Co., Illinois.

Achemenides pectinatus: Shear, 1971, Bull. Mus. Comp. Zool., 141: 84, figs. 10, 54-58.

Range: Caves and mines in the “driftless” region of Illinois, Iowa, and Wisconsin (Shear, 1971, map 3).

Genus **Austrotyla** Causey

Austrotyla Causey, 1961, Proc. Biol. Soc. Washington, 74: 260 (8 December). Type species: *Conotyla specus* Loomis, by original designation. – Shear, 1971, Bull. Mus. Comp. Zool., 141: 89 (revision).

Sonorotyla Hoffman, 1961, Trans. American Entom. Soc., 87: 269 (20 December). Type species: *Conotyla montivaga* Loomis, by original designation. Synonymized by Loomis & Schmitt, 1971.

Six species, Rocky Mountain system from Alberta to Chihuahua; also upper Mississippi River valley (Shear, 1971, map 1).

Austrotyla borealis Shear

Austrotyla borealis Shear, 1971, Bull. Mus. Comp. Zool., 141: 92, figs. 71-73. ♂ HT (MCZ) from Jasper National Park, 5300 ft., Alberta, Canada.

Austrotyla chihuahua Shear

Austrotyla chihuahua Shear, 1971, Bull. Mus. Comp. Zool. 141: 94, figs. 77-79. ♂ HT (MCZ) from Rio Urique, 84 km south of Creel, Chihuahua, Mexico.

Austrotyla coloradensis (Chamberlin)

Conotyla coloradensis Chamberlin, 1910, Ann. Entom. Soc. America, 3: 237, pl. 32, figs. 7-9, pl. 33, figs. 1-3. Type material lost, from "Colorado"; ♂ NT (MCZ) from Allen's Park, Boulder Co., Colorado.

Austrotyla coloradensis: Causey, 1961, Proc. Biol. Soc. Washington, 74: 254, figs. 2-4 (designation of neotype). – Shear, 1971, Bull. Mus. Comp. Zool., 141: 92, figs. 74-76.

Range: Widespread in Colorado, doubtless occurs in adjacent states (Shear, 1971, map 4).

Austrotyla montani Loomis & Schmitt

Austrotyla montani Loomis & Schmitt, 1971, Northwest Sci., 45: 122, fig. 12. ♂ HT (USNM) from jct. Clark Fork and Deep Creek, Missoula Co., Montana. – Shear, 1976, American Mus. Nov., 2600: 19, fig. 40.

Austrotyla montivaga (Loomis)

Conotyla montivaga Loomis, 1943, Bull. Mus. Comp. Zool., 92: 383, figs. 4a-d. ♂ HT (MCZ) from Santa Rita Mountains at 7500 ft., Pima Co., Arizona.

Austrotyla specus montivaga: Causey, 1961, Proc. Biol. Soc. Washington, 74: 264.

Sonoratyla montivaga: Hoffman, 1961, Trans. American Entom. Soc., 87: 268, figs. 10, 11.

Austrotyla montivaga: Shear, 1971, Bull. Mus. Comp. Zool. 141: 91, figs. 68-70.

Range: Santa Rita and Santa Catalina mountains, southeastern Arizona.

Austrotyla specus (Loomis)

Conotyla specus Loomis, 1939, Bull. Mus. Comp. Zool., 86: 184, figs. 11a-c. ♂ HT (MCZ) from Rice's Cave, three miles NE of Goldman, Jefferson Co., Missouri.

Austrotyla specus specus: Causey, 1961, Proc. Biol. Soc. Washington, 74: 260, figs. 5-10.

Austrotyla specus: Shear, 1971, Bull. Mus. Comp. Zool., 141: 89, figs. 65-67.

Range: Southern Illinois and adjacent Missouri, north to southern Wisconsin (Shear, 1971, map 3).

Genus **Corypus** Loomis & Schmitt

Corypus Loomis & Schmitt, 1971, Northwest Sci., 45: 123. Type species: *C. cochlearis* Loomis & Schmitt, by original designation. – Shear, 1976, American Mus. Nov., 2600: 19.

Two species, Idaho, Montana.

Corypus cochlearis Loomis & Schmitt

Corypus cochlearis Loomis & Schmitt, 1971, Northwest Sci., 45: 123, figs. 16-18. ♂ HT (USNM) from Finnegan Creek, two miles west of Noxon, Sanders Co., Montana. – Shear, 1976, American Mus. Nov., 2600: 19, figs. 41, 42.

Corypus kavanaughi Shelley

Corypus kavanaughi Shelley, 1997, Myriapodologica, 4: 123, figs. 2-8. ♂ HT (CAS) from along Isabella Creek in the Clearwater Mountains, Clearwater National Forest, ca. 0.2 mi north of the North Fork Clearwater River and 18 mi NE Headquarters, Clearwater County, Idaho.

Subfamily Conotylinae Cook

Conotylinae Verhoeff, 1914, Zool. Anz., 43: 347 (nomen translatum ex Conotylidae Cook, 1896) – Shear, 1976, American Mus. Nov., 2600: 5.

Five genera, Appalachian and Cordilleran regions of North America.

Genus **Bollmanella** Chamberlin

Bollmanella Chamberlin, 1941, Bull. Univ. Utah, 31(12): 12. Type species: *B. oregona* Chamberlin, by original designation. – Shear, 1974, Psyche, 81: 135 (revision).

Eight species, southern coastal Oregon north to the Columbia River in Mason Co., Washington.

Bollmanella bella Shear

Bollmanella bella Shear, 1974, Psyche, 81: 144, figs. 13, 14. ♂ HT (MCZ) from 11 miles east/four miles west of Alleghany, Douglas-Coos cos., Oregon.

Bollmanella bifurcata Shear

Bollmanella bifurcata Shear, 1974, Psyche , 81: 143, figs. 11, 12. ♂ HT (MCZ) from Hurricane Creek, two miles west of Joseph, Wallowa Co., Oregon.

Bollmanella camassia Shear

Bollmanella camassia Shear, 1974, Psyche, 81: 145, figs. 15-17. ♂ HT (MCZ) from two miles NE of Camas Valley on Rte. 42, Douglas Co., Oregon.

Bollmanella complicata Shear

Bollmanella complicata Shear, 1974, Psyche, 81: 146, figs. 18-20. ♂ HT (MCZ) from one mile west of Bayshore (four miles north of Shelton), Mason Co., Washington.

Bollmanella laminata Shear

Bollmanella laminata Shear, 1974, Psyche, 81: 141, figs. 5-7. ♂ HT (MCZ) from 0.3 miles west of railroad overpass on Oregon Rt. 26, three miles east of Timber, Washington Co., Oregon.

Bollmanella oregona Chamberlin

Bollmanella oregona Chamberlin, 1941, Bull. Univ. Utah, 31(12): 12. ♂ HT (USNM) from "Oregon: Douglas County: John Day Creek" [interpreted by Shear (1974) to be Days Creek, in Douglas County]. – Shear, 1974, Psyche, 81: 136, figs. 1, 2.

Range: Recorded from numerous localities in Josephine, Douglas, and Jackson cos., Oregon.

Bollmanella reducta Shear

Bollmanella reducta Shear, 1974, Psyche, 81: 139, figs. 3, 4. ♂ HT (MCZ) from two miles north/six miles east of Ashland, Jackson Co., Oregon.

Bollmanella unca Shear

Bollmanella unca Shear, 1974, Psyche, 81: 141, figs. 8-10. ♂ HT (MCZ) from 4.5 miles east of Wells Creek Ranger Station, Douglas Co., Oregon.

Genus **Brunsonia** Loomis & Schmitt

Brunsonia Loomis & Schmitt, 1971, Northwest Sci., 45: 122. Type species: *B. complexipes* Loomis & Schmitt, by original designation.

Two species: Alberta, Canada, and Montana.

Shear (1976) considered this taxon to be a junior synonym of *Conotyla*.

Brunsonia albertana (Chamberlin)

Conotyla albertana Chamberlin, 1920, Canadian Entom., 52: 167, fig. 17. ♂ HT (MCZ) from "Bow River, Alberta", restricted by Shear (1971: 82) to vicinity of Lake Louise, Banff National Park, Alberta, Canada. – Shear, 1971, Bull. Mus. Comp. Zool. 141: 82, figs. 51-53.

Brunsonia complexipes Loomis & Schmitt, 1971, Northwest Sci., 45: 123, figs. 13-15. ♂ HT (USNM) from Range: Rocky Mountains, from Jasper National Park, Alberta, south to western Montana.

Brunsonia atrolineata (Bollman), new combination

Craspedosoma atrolineata Bollman, 1893, Bull. U. S. Nat. Mus. 46: 35. ♂ HT (USNM) from "Glacier, British Columbia" [suggested by Shear (1971) to be the post office by that name in the present Glacier National Park].

Conotyla atrolineata: Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 75, figs. 95-100. – Shear, 1971, Bull. Mus. Comp. Zool. 141: 80, figs. 6, 46-50.

Range: Several localities in the Mt. Robson and Yoho National Parks, eastern British Columbia.

Genus **Conotyla** Cook & Collins

Conotyla Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 70. Type species: *C. fischeri* Cook & Collins, by original designation. – Hoffman, 1961, Trans. American Entom. Soc., 87: 265. – Shear, 1971, Bull. Mus. Comp. Zool. 141: 64 (revision).

Proconotyla Verhoeff, 1932, Zool. Jahrb. Abt. Syst., 62: 501. Type species: *P. blakei* Verhoeff, by monotypy. Synonymized by Shear, 1971.

12 species, eastern North America

Conotyla aeto Shear

Conotyla aeto Shear, 1971, Bull. Mus. Comp. Zool., 141: 76, figs. 37, 38. ♂ HT (MCZ) from Clinch Mountain, Burkes Garden, Tazewell Co., Virginia.

Conotyla blakei (Verhoeff)

Proconotyla blakei Verhoeff, 1932, Zool. Jahrb. Abt. Syst. 62: 501, figs. 33-37. ♂ HT (ZSM) from Mount Adams, Essex Co., New York.

Conotyla vaga Loomis, 1939, Bull. Mus. Comp. Zool., 86: 182, fig. 10. ♂ HT (MCZ) from South Temple Cave, Berks Co., Pennsylvania. Synonymized by Shear, 1971.

Conotyla blakei: Shear, 1971, Bull. Mus. Comp. Zool. 141: 67, figs. 12-18.

Range: Northern Appalachians from Gaspé Peninsula, Quebec to Maryland (Shear, 1971, map 2, and Shelley, 1996: 276).

Conotyla bollmani (McNeill)

Trichopetalum bollmani McNeill, 1887, Proc. U. S. Nat. Mus. 10: 330. Status of type material unknown (?USNM) from Mayfields Cave, Bloomington, Monroe Co., Indiana.

Scotherpes wyandotte Bollman, 1889, Proc. U. S. Nat. Mus., 11: 405. Status of type material unknown (?USNM) from "near" Wyandotte Cave, Crawford Co., Indiana. Synonymized by Shear, 1971.

Conotyla bollmani: Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 76, figs. 79-94. – Shear, 1971, Bull. Mus. Comp. Zool., 141: 69, figs. 19, 20.

Conotyla wyandotte: Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 78, fig. 101.

Range: Caves and surface sites in Crawford, Jennings, Lawrence, Monroe, Orange, and Washington cos., Indiana (Hoffman & Lewis, 1997, fig. 7).

Conotyla celeno Shear

Conotyla celeno Shear, 1971, Bull. Mus. Comp. Zool., 141: 80, figs. 43-45. ♂ HT (MCZ) from fire tower site on Iron Mountain above Comer's Rock, Grayson Co., Virginia.

Conotyla elpenor Shear

Conotyla elpenor Shear, 1971, Bull. Mus. Comp. Zool. 141: 73, figs. 28, 29. ♂ HT (MCZ) from nine miles west of Pine Ridge, Powell Co., Kentucky.

Conotyla fischeri Cook & Collins

Conotyla fischeri Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 71, figs. 55-78. No type series extant. Type locality restricted to (without designation of neotype) by Chamberlin & Hoffman (1958). – Shear, 1971, Bull. Mus. Comp. Zool., 141: 72, figs. 3, 24, 25.

Range: central New York, east to the Adirondacks (Shear, 1971, map 2).

Conotyla melinda Hoffman

Conotyla melinda Hoffman, 1971, Trans. American Entom. Soc., 87: 266, figs. 4-6. ♂ HT (USNM) from crest of Brush Mountain, one mile west of Blacksburg, Montgomery Co., Virginia. – Shear, 1971, Bull. Mus. Comp. Zool., 141: 77, figs. 1, 2, 39, 40.

Range: Craig, Giles, Montgomery, and Patrick cos., Virginia (Shear, 1971, map 5).

Conotyla ocypetes Shear

Conotyla ocypetes Shear, 1971, Bull. Mus. Comp. Zool., 141: 76, figs. 35, 36. ♂ HT (MCZ) from Sugar Grove, Fairfield Co., Ohio.

Conotyla personata Shear

Conotyla personata Shear, 1971, Bull. Mus. Comp. Zool., 141: 73, figs. 26, 27. ♂ HT (MCZ) from Funk's Hollow at Wooster, Wooster Co., Ohio.

Conotyla smilax Shear

Conotyla smilax Shear, 1971, Bull. Mus. Comp. Zool., 141: 75, figs. 30, 31. ♂ HT (MCZ) from Kate's Mountain, White Sulphur Springs, Greenbrier Co., West Virginia.

Conotyla venetia Hoffman

Conotyla venetia Hoffman, 1961, Trans. American Entom. Soc., 87: 267, figs. 1-3. ♂ HT (USNM) from three miles north of Clifton Forge, Alleghany Co., Virginia. – Shear, 1971, Bull. Mus. Comp. Zool., 141: 75, figs. 32-34.

Range: Two surface sites in Alleghany Co., Virginia (Shear, 1971, map 2).

Conotyla vista Shear

Conotyla vista Shear, 1971, Bull. Mus. Comp. Zool., 141: 79, figs. 41, 42. ♂ HT (MCZ) from Grandview State Park, 13 miles NE of Beckeley, Raleigh Co., West Virginia.

Genus **Plumatyla** Shear

Plumatyla Shear, 1972, Bull. Mus. Comp. Zool. 144: 94. Type species: *Conotyla humerosa* Loomis, by original designation.

One species, northern California.

Plumatyla humerosa (Loomis)

Conotyla humerosa Loomis, 1943, Bull. Mus. Comp. Zool., 92: 384, figs. 5a-d. ♂ HT (USNM) from Sunnyside Mine, three miles SW of Seneca, Plumas Co., California.

Plumatyla humerosa: Shear, 1971, Bull. Mus. Comp. Zool. 141: 95, figs. 80, 81.

Range: Siskiyou and Plumas cos., California.

Genus **Taiyutyla** Chamberlin

Taiyutyla Chamberlin, 1952, Chicago Acad. Sci. Nat. Hist. Misc., 113: 1. Type species: *T. corvallis* Chamberlin, by original designation. – Hoffman, 1961, Trans. American Entom. Soc. 87: 270. – Shear, 1976, American Mus. Nov., 2600: 6 (revision).

Fourteen species, northern California and western Oregon, apparently disjunct in western Montana.

Taiyutyla benedictae Shear

Taiyutyla benedictae Shear, 1976, American Mus. Nov., 2600: 7, figs. 3-5. ♂ HT (AMNH) from Rt. 242, 17 miles NE of McKenzie Bridge, Lane Co., Oregon.

Taiyutyla clarki Shear

Taiyutyla clarki Shear, 1976, American Mus. Nov., 2600: 14, figs. 26-28. ♂ HT (AMNH) from Boulder Flat Campground, three miles east/ 10 miles south, of Steamboat, Douglas Co., Oregon.

Taiyutyla clatsop Shear

Taiytutyla clatsop Shear, 1976, American Mus. Nov., 2600: 6, figs. 1, 2. ♂ HT (AMNH) from five miles north/seven miles west, of Elsie, Clatsop Co., Oregon.

Taiyutyla corvallis Chamberlin

Taiyutyla corvallis Chamberlin, 1952, Chicago Acad. Sci. Nat. Hist. Misc., 113: 1, figs. 1, 2. Location of male holotype unknown, from Corvallis, Linn Co., Oregon. – Hoffman, 1961, Trans. American Entom. Soc., 87: 270, figs. 8, 9. – Shear, 1971, Bull. Mus. Comp. Zool., 141: 87, figs. 8, 59, 60.

Taiyutyla curvata Loomis & Schmitt

Taiyutyla curvata Loomis & Schmitt, 1971, Northwest Sci., 45: 125, figs. 19-21. ♂ HT (USNM) from Leigh Lake campground, Lincoln Co., Montana.

Taiyutyla extorris (Shear)

Conotyla extorris Shear, 1971, Bull. Mus. Comp. Zool., 141: 70, figs. 22, 23. ♂ HT (MCZ) from one mile south of Grass Valley, Nevada Co., California.

Taiyutyla extorris: Shear, 1976, American Mus. Nov., 2600: 6.

Taiyutyla francisca Shear

Taiyutyla francisca Shear, 1971, Bull. Mus. Comp. Zool., 141: 79, figs. 61, 62. ♂ HT (MCZ) from one mile SE of Inverness, Marin Co., California.

Taiyutyla glomerata (Harger)

Trichopetalum glomeratum Harger, 1872, American Journ. Sci. & Arts, 4: 118, pl. 11, fig. 5. ♀ HT (PMNH) from "valley of the John Day River, Oregon....", restricted by Shelley (1993) to the vicinity of Canyon City, Grant Co., Oregon.

Conotyla glomerata: Cook & Collins, 1895, Ann. New York Acad. Sci. 9: 78.

Taiyutyla glomerata: Shelley, 1993, Brimleyana, 18: 5 (redescription of female holotype, identification of type locality).

Taiyutyla lewisi Shear

Taiyutyla lewisi Shear, 1976, American Mus. Nov., 2600: 13, figs. 23-25. ♂ HT (AMNH) from five miles north of Elmira, jct. Demming and Territorial roads, Lane Co., Oregon.

Range: Northwestern Oregon (Lane, Benton, Columbia cos.) and adjacent Washington (Mason Co.).

Taiyutyla millicoma Shear

Taiyutyla millicoma Shear, 1976, American Mus. Nov., 2600: 11, figs. 16-18. ♂ HT (AMNH) from 14 miles east/two miles south of Alleghany, Coos Co., Oregon.

Range: Numerous localities in Coos and Douglas cos., Oregon.

Taiyutyla napa Shear

Taiyutyla napa Shear, 1971, Bull. Mus. Comp. Zool. 141: 88, figs. 63, 64. ♂ HT (MCZ) from Mount St. Helena, Napa Co., California.

Taiyutyla prefemorata Shear

Taiyutyla prefemorata Shear, 1976, American Mus. Nov., 2600: 11, figs. 14, 15. ♂ HT (AMNH) from Canyonville County Park, two miles east of Canyonville, Rte. 227, Douglas Co., Oregon.

Range: Lane and Douglas cos., Oregon.

Taiyutyla simplex Shear

Taiyutyla simplex Shear, 1976, American Mus. Nov., 2600: 7, figs. 6-8. ♂ HT (AMNH) from 3.2 miles NE of Scottburg, Douglas Co., Oregon.

Range: Coos, Curry, and Douglas cos., Oregon.

Taiyutyla trifurca Shear

Taiyutyla trifurca Shear, 1976, American Mus. Nov. 2600: 9, figs. 9-11. ♂ HT (AMNH) from two miles north/seven miles east, of the McKenzie Bridge, Rt. 126, Douglas Co., Oregon.

Range: Douglas, Lane, and Clackamas cos., Oregon.

Taiyutyla variata Shear

Taiyutyla variata Shear, 1976, American Mus. Nov., 2600: 13, figs. 19-22. ♂ HT (AMNH) from the Upper Applegate River, 3.5 miles south of Ruch, Jackson Co., Oregon.

Subfamily Idagoninae Buckett & Gardner

Nomen translatum Hoffman, 1980, ex Idagonidae Buckett & Gardner. 1967, Michigan Entom., 1: 117.

Shear (1976), however, considers *Idagona* to be referable to the subfamily Austrotylinae.

Genus **Idagona** Buckett & Gardner

Idagona Buckett & Gardner, 1967, Michigan Entom., 1: 120. Type species: *I. westcotti* Buckett & Gardner, by original designation.

One species, Idaho.

Idagona westcotti Buckett & Gardner

Idagona westcotti Buckett & Gardner, 1967, Michigan Entom. 1: 120, figs. 1-8. ♂ HT (UCD) from Crystal Falls Cave, 20 miles NE of Dubois, Clark Co., Idaho.

Subfamily Lophominae Loomis & Schmitt

Lophominae Loomis & Schmitt, 1971, Northwest Sci., 45: 125. – Shear, 1976, American Mus. Nov., 2600: 17.

One genus, Washington and Montana.

Genus **Lophomus** Loomis & Schmitt

Lophomus Loomis & Schmitt, 1971, Northwest Sci., 45: 125. Type species: *L. laxus* Loomis & Schmitt, by original designation. – Shear, 1976, American Mus. Nov., 2600: 17.

Troglotyla Causey, 1972, Proc. Louisiana Acad. Sci., 35: 27. Type species: *T. skamania* Causey, by original designation. Synonymized by Shear, 1976.

Two species, Washington, Montana.

Lophomus laxus Loomis & Schmitt

Lophomus laxus Loomis & Schmitt, 19712, Northwest Sci., 45: 125, figs. 22-25. ♂ HT (USNM) from Patee Canyon, Missoula Co., Montana. – Shear, 1976, American Mus. Nov., 2600: 17, figs. 36, 37, 39.

Lophomus skamania (Causey)

Troglotyla skamania Causey, 1972, Proc. Louisiana Acad. Sci., 35: 27, figs. 1-4. ♂ HT (USNM) from Dead Horse Cave, one mile northwest of Trout Lake, Skamania Co., Washington.

Lophomus skamania : Shear, 1976, American Mus. Nov., 2600: 17, figs. 34, 35, 38.

Subfamily Macromastinae Loomis & Schmitt

Macromastidae Loomis & Schmitt, 1971, Northwest Sci., 45: 126.

Macromastinae: Shear, 1976, American Mus. Nov. 2600: 14. – Hoffman, 1980, Classification of the Diplopoda, p. 129.

One genus, north central Idaho..

Genus **Macromastus** Loomis & Schmitt

Macromastus Loomis & Schmitt, 1971, Northwest Sci., 45: 126. Type species: *M. marginandus* Loomis & Schmitt, by original designation.

Two species, western Idaho, Oregon.

Macromastus marginandus Loomis & Schmitt

Macromastus marginandus Loomis & Schmitt, 1971, Northwest Sci., 45: 126, figs. 26-29. ♂ HT (USNM) from 17 miles east of Lowell on State Hy. 9 [? 12], Idaho Co., Idaho. – Shear, 1976, American Mus. Nov., 2600: 16, figs. 29-32.

Macromastus umpqua Shear

Macromastus umpqua Shear, 1982, Myriapodologica, 1: 98, figs. 8-11. ♂ HT (CAS) from Clearwater No. 1 Lava Tube, North Umpqua, Douglas Co., Oregon.

CONOTYLIDAE OF UNCERTAIN TAXONOMIC STATUS

The following four generic categories were founded upon female or immature male type material, and are currently of uncertain validity. Anyone able to study adult males from the type localities cited for each will be able to substantially clarify our knowledge of conotylids in the northern Rocky Mountain system.

Cookella leibergi (Cook & Collins)

Conotyla leibergi Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 77, figs. 102-104. ♀ HT (formerly USNM, possibly lost), from Lake Pend d'Oreille, Kootenai Co., Idaho.

Cookella leibergi: Chamberlin, 1941, Bull. Univ. Utah, 31(12): 13 (as type species of the new genus *Cookella*).

Shear (1976: 21) did not suggest a generic identity for this species, pending collection of male topotypes.

Zygotyla phana Chamberlin

Zygotyla phana Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc., 87: 7, fig. 14. ♂ HT (location unknown) from "Blue River, British Columbia." – Shear, 1976, American Mus. Nov. 2600: 21.

Shear (1976: 21) deduced that although the holotype of *phana* was immature (as well as being lost), circumstantially the name is a junior synonym of *Brunsonia atrolineata*, "...the only conotylid to appear in several large collections from British Columbia."

Endopus parvipes Loomis & Schmitt

Endopus parvipes Loomis & Schmitt, 1971, Northwest Sci., 45: 128, fig. 32. Imm. ♂ HT (USNM) from east of Hell Roaring pass at 6800 ft., Rainbow Lake, Lake Co., Montana. Designated type species of the new genus *Endopus*. – Shear, 1976, American Mus. Nov., 2600: 21.

Shear (1976: 21) suspected that the name *parvipes* is a junior synonym of *Brunsonia complexipes* Loomis & Schmitt [= *Brunsonia albertana* (Chamberlin)]; if correct, *Endopus* becomes a junior synonym of *Brunsonia* (of present usage) or of *Conotyla* (following Shear, 1976: 5).

Orthogmus oculatus Loomis & Schmitt

Orthogmus oculatus Loomis & Schmitt, 1971, Northwest Sci., 45: 130, figs. 33-36. Imm. ♂ HT (USNM) from Finnigan Creek, two miles west of Noxon, Sanders Co., Montana.

Shear (1976: 21) examined the holotype of *oculatus*, but did not advance any ideas about its taxonomic status. Loomis (1971: 129, footnote) agreed that the holotype was immature, but defended its status "...as a readily identfiable member of a valid new genus of the order Chordeumida."

Family Adritylidae Shear

Adritylidae Shear, 1971, Bull. Mus. Comp. Zool., 141: 57. – Hoffman, 1980, Classification of the Diplopoda, p. 128.

One genus, northern Rocky Mountains.

Genus **Adrityla** Causey

Adrityla Causey, 1961, Psyche, 68: 131. Type species: *Conotyla deseretae* Chamberlin, 1910 "by monotypy" but in fact by original designation; 1972, Proc. Louisiana Acad. Sci. 35: 29 (key to species).

Three species, northern Rocky Mountains (Utah, Montana, Wyoming).

Adrityla brevis Causey

Adrityla brevis Causey, 1972, Proc. Louisiana Acad. Sci. 35: 30, figs. 5-7. ♂ HT (USNM) from top of Medicine Mountain, 9956 ft., Big Horn Co., Wyoming.

Adrityla cucullata Loomis & Schmitt

Adrityla cucullata Loomis & Schmitt, 1971, Northwest Sci., 45: 112, figs. 9-11. ♂ HT (USNM) from "Miller Creek, 10 miles from highway", Missoula Co., Montana.

Adrityla deseretae (Chamberlin)

Conotyla deseretae Chamberlin, 1910, Ann. Entom. Soc. America, 3: 235, pl. 31, figs. 3-8, pl. 32, figs. 1-7. Type material lost, from "Wahsatch Mountains", Utah. – Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 98.

Adrityla deseretae: Causey, 1961, Psyche, 68: 131, figs. 1-4. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 273, figs. 494-496.

Range: Utah, Salt Lake, and Toole cos., Utah.

Superfamily Craspedosomatoidea Brolemann

Family Craspedosomatidae Gray

Craspedosomadae [*sic!*] Gray, 1843, in R. B. Todd (ed.) The Cyclopaedia of Anatomy and Physiology, 3: 546.

Craspedosomatidae Cook, 1895, Ann. New York Acad. Sci., 9:3 – Hoffman, 1980, Classification of the Diplopoda, p. 133.

Genus **Craspedosoma** Leach

Craspedosoma Leach, 1814, Brewster's Edinburgh Encyclopaedia, 7: 407. Type species: *C. Raulinsii* Leach, by subsequent designation of Cook & Collins, 1895.

About 10 species, western Europe.

Craspedosoma raulinsi Leach

Craspedosoma raulinsi Leach, 1814, Edinburgh Encylopaedia, 7: 407; 1815, Trans. Linnean Soc. London, 11: 380. – Shelley, 1990, Entom. Month. Mag. 126: 117.

Craspedosoma simile Verhoeff, 1891, Berliner Entom. Zeitschr., 36: 128, figs. 8, 9. – Schubart, 1934, Tierwelt Deutschlands, 28: 141, fig. 244.

Range: Europe, from the British Islands to southern Scandanavia, Austria, northern Italy. In North America, recently discovered, and apparently established, in Gatineau Park near Hull, Quebec (Shelley, 1990).

The name of this species has been almost universally spelled "*rawlinsii*".

Superfamily Brannerioidea Cook

Brannerioidea Shear, 1972, Bull. Mus. Comp. Zool., 144: 263. Nomen translatum ex Branneriidae Cook, 1896. – Hoffman, 1980, Classification of the Diplopoda, p. 135.

Family Apterouridae Loomis

Apterouridae Loomis, 1966, Proc. Biol. Soc. Washington, 79: 223. – Shear, 1977, Proc. Biol. Soc. Washington, 89: 689.

One genus, California.

Genus **Apterourus** Loomis

Apterourus Loomis, 1966, Proc. Biol. Soc. Washington, 79: 223. Type species: *A. horizontalis* Loomis, by original designation.

One species, southern California.

Apterourus horizontalis Loomis

Apterourus horizontalis Loomis, 1966, Proc. Biol. Soc. Washington, 79: 223, figs. 1-4. ♂ HT (USNM) from Cajon Pass, seven miles west of Cajon on Big Pine Road, 22 miles north of Riverside, San Bernardino Co., California.

Family Branneriidae Cook

Branneriidae Cook, 1896, Brandtia, 2: 8. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 266.

One genus, southeastern United States.

Genus **Branneria** Bollman

Branneria Bollman, 1893, Bull. U. S. Nat. Mus. 46: 158. Type species: *Craspedosoma carinatum* Bollman, 1887, by original designation.

One species: southeastern United States.

Branneria carinata (Bollman)

Craspedosoma carinatum Bollman, 1888, Ann. New York Acad. Sci., 10: 108. Type material apparently lost, from Beaver Creek, Jefferson Co., Tennessee.

Branneria carinata (by implication): Bollman, 1893, Bull. U. S. Nat. Mus., 46: 158. – Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 33, fig. 1. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 266, figs. 473-78 (description, localities).

Range: North Carolina to northern Florida, west to Mississippi.

Family Tingupidae Loomis

Tingupidae Loomis, 1966, Proc. Biol. Soc. Washington, 79: 227. – Shear, 1981, American Mus. Nov., 2715: 5 (revision). – Shear & Hubbard, 1988, Myriapodologica, 5: 86 (discussion, key to genera).

Three genera, transcontinental United States (Shear, 1981, map 1).

Genus **Blancosoma** Shear & Hubbard

Blancosoma Shear & Hubbard, 1998, Myriapodologica, 5: 88. Type species: *B. scaturgo* Shear & Hubbard, by original designation.

One species, Colorado.

Blancosoma scaturgo Shear & Hubbard

Blancosoma scaturgo Shear & Hubbard, 1998, Myriapodologica, 5: 88, figs. 1-6. ♂ HT (VMNH) from Spring Cave, 0.75 miles west of South Fork Campground, Rio Blanco Co., Colorado.

Genus **Buotus** Chamberlin

Buotus Chamberlin, 1940, Canadian Entom., 72: 58. Type species: *T. carolinus* Chamberlin, by original designation. – Shear, 1981, American Mus. Nov., 2715: 18.

One species, central Appalachian region.

Buotus carolinus Chamberlin

Buotus carolinus Chamberlin, 1940, Canadian Entom., 72: 58. ♂ HT (USNM) from "Duke Forest", Durham Co., North Carolina. – Shear, 1981, American Mus. Nov., 2715: 18, figs. 30-33. – Shear & Hubbard, 1998, Myriapodologica, 5: 92, figs. 7, 8.

Range: Central North Carolina, north and west to Pendleton Co., West Virginia.

The Duke Forest consists of a number of isolated tracts in several counties; the type locality is presumably in that unit closest to the Duke University campus, on the west side of Durham, N. C.

Genus **Tingupa** Chamberlin

Tingupa Chamberlin, 1910, Ann. Entom. Soc. America, 3: 328. Type species: *T. utahensis* Chamberlin, by original designation. – Shear, 1981, American Mus. Nov., 2715: 6 (revision).

Ten species, central and western North America (Shear, 1981, map 1).

Tingupa arizonica Loomis

Tingupa arizonica Loomis, 1966, Proc. Biol. Soc. Washington, 79: 228, figs. 14-16. ♂ HT (USNM) from Mount Lemmon, Santa Catalina Mountains, Pima Co., Arizona. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 265, figs. 465-468.

Range: Mountains of extreme southeastern Arizona (Pima, Cochise, Graham cos.).

Tingupa auricula Shear

Tingupa auricula Shear, 1981, American Mus. Nov., 2715: 13, figs. 17-20. ♂ HT (AMNH) from four miles southeast of Olney, Clatsop Co., Oregon.

Range: Western Oregon (Clatsop, Coos, Douglas, Lincoln cos.)

Tingupa benedictae Shear

Tingupa benedictae Shear, 1981, American Mus. Nov., 2715: 8, figs. 1-8. ♂ HT (AMNH) from 4.5 miles west of Wells Creek Ranger Station [not located to county], Oregon.

Range: Western Oregon (Clatsop, Columbia, Curry, Douglas, Lincoln, Tillamook cos.)

Tingupa causeyae Shear

Tingupa causeyae Shear, 1981, American Mus. Nov., 2715: 12, figs. 14-16. ♂ HT (AMNH) from Turnbow Lane, 4.5 miles NW of Cheshire, Lane Co., Oregon.

Range: Western Oregon (Benton, Coos, Douglas cos.)

Tingupa clatskanie Shear

Tingupa clatskanie Shear, 1981, American Mus. Nov., 2715: 10, figs. 9-11. ♂ HT (AMNH) from three miles SW of Clatskanie, Columbia Co., Oregon.

Tingupa eldorado Shear

Tingupa eldorado Shear, 1981, American Mus. Nov., 2715: 16, figs. 27-29. ♂ HT (AMNH) from Riverton, Eldorado Co., California.

Tingupa pallida Loomis

Tingupa pallida Loomis, 1939, Bull. Mus. Comp. Zool., 86: 185, figs. 12a-c. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 265, figs. 469-472.

Range: Caves in southeastern Missouri and adjacent parts of Illinois and Arkansas.

Tingupa sinuosa Shear

Tingupa sinuosa Shear, 1981, American Mus. Nov., 2715: 14, figs. 21-24. ♂ HT (AMNH) from one mile east of Oakridge, Lane Co., Oregon.

Range: Western Oregon (Curry, Douglas, Lane cos.)

Tingupa tillamook Shear

Tingupa tillamook Shear, 1981, American Mus. Nov., 2715: 11, figs. 12, 13. ♂ HT (AMNH) from four miles SE of Blaine, Tillamook Co., Oregon.

Family Rhiscosomididae Silvestri

Rhiscosomididae Silvestri, 1909, Rend. Accad. Lincei, 18: 232; 1913, Boll. Lab. Zool. Portici, 7: 307. – Shear, 1973, Psyche, 80: 190 (revision).

One genus, northwestern North America (California, Oregon).

Genus **Rhiscosomides** Silvestri

Rhiscosomides Silvestri, 1909, Rend. Accad. Lincei, 18: 232. Type species: *R. mineri* Silvestri, by monotypy.

Seven species, California and Oregon (Shear, 1973, map 1).

Rhiscosomides acovescor Shear

Rhiscosomides acovescor Shear, 1972, Bull. Mus. Comp. Zool., 144: 262, figs. 541-458. ♂ HT (MCZ) from S. P. Taylor State Park, Marin Co., California.

Rhiscosomides benedictae Shear

Rhiscosomides benedictae Shear, 1973, Psyche, 80: 200, figs. 10-14. ♂ HT (MCZ) from Marine Biological Institute at Charleston, Coos Co., Oregon.

Range: Western Oregon (Lincoln, Coos, Benton, Douglas cos.)

Rhiscosomides josephi Chamberlin

Rhiscosomides josephi Chamberlin, 1941, Bull. Univ. Utah, 31(12): 16. ♀ HT (USNM) from "John Day Creek". Douglas Co., Oregon, corrected by Shear (1973: 196) to Day Creek at town with same name, Douglas Co., Oregon. – Shear, 1973, Psyche, 80: 196, figs. 4-9.

Range: Western Oregon (Coos, Curry, Douglas cos.)

Rhiscosomides malcomi Shear

Rhiscosomides malcomi Shear, 1973, Psyche, 80: 200, figs. 15, 16. ♂ HT (MCZ) from 5 miles west/13 miles north of Brookings, Curry Co., Oregon.

Rhiscosomides mineri Silvestri

Rhiscosomides mineri Silvestri, 1909, Rend. Accad. Lincei, 18: 232. ♂ HT (?LEAP) from Lebanon, Linn Co., Oregon. Silvestri, 1913, Boll. Lab. Zool. Portici, 7: 308, figs. 4-7. – Shear, 1973, Psyche, 80: 194, figs. 1-3.

Range: Western Oregon (Linn, Tillamook, Washington, Yamhill cos.).

Rhiscosomides montereum (Chamberlin)

Tingupa monterea Chamberlin, 1910, Ann. Entom. Soc. America, 3: 240, figs. 3-5. Status of type material unknown, presumed lost, from Pacific Grove, Monterey Co., California.

Rhiscosomides monterea: Shear, 1972, Bull. Mus. Comp. Zool., 144: 262.

Rhiscosomides montereum: Shear, 1973, Psyche, 80: 194.

Rhiscosomides trinitarium Shear

Rhiscosomides trinitarium Shear, 1973, Psyche, 80: 203, fig. 18. ♂ HT (CAS) from Butter Creek, 12 miles southeast of Hyampom, Trinity Co., California.

Family Caseyidae Verhoeff

Caseyidae Verhoeff, 1909, Zool. Anz., 34: 507. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 258. – Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 177 (revision).

Underwoodiidae Verhoeff, 1909, Zool. Anz., 34: 568. Synonymized by Causey, 1963.

Six genera, northeastern and western North America (Gardner & Shelley, 1989, fig. 219); eastern Russia.

The sequence of genera in Gardner & Shelley's monograph follows their order of appearance in the key to genera and was not represented as phylogenetic. In keeping with the format adopted for this list, I arrange the generic sequence alphabetically.

Genus **Caseya** Cook & Collins

Caseya Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 84. Type species: *C. heteropus* Cook & Collins, by original designation. – Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 223.

Placerna Chamberlin, 1941, Bull. Univ. Utah, 31(12): 10. Type species: *P. dorada* Chamberlin, by original designation. Synonymized by Hoffman, 1980.

Zantona Chamberlin, 1941, Bull. Univ. Utah, 31(12): 11. Type species: *Z. douglasia* Chamberlin, by original designation. Synonymized by Gardner & Shelley, 1989.

21 species, southern California to the Olympic Peninsula, Washington (Gardner & Shelley, 1989, figs. 223-224).

Caseya benedictae Gardner & Shelley

Caseya benedictae Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 246, figs. 147, 148. ♂ HT (AMNH) from Charleston Woods near the Marine Biological Institute, Coos Co., Oregon.

Caseya borealis Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 231, figs. 119, 125, 186. ♂ HT (AMNH) from four miles north of Shelton, Mason Co., Washington.

Range: Recorded from several localities in Mason and Thurston cos., Washington.

Caseya bryophila Gardner & Shelley

Caseya bryophila Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 233, figs. 120, 126-128, 185. ♂ HT (AMNH) from 15 miles SW of Ruch, Jackson Co., Oregon.

Range: Recorded from several localities in Jackson and Josephine cos., Oregon.

Caseya bucketti Gardner & Shelley

Caseya bucketti Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 231, figs. 156, 157, 206). ♂ HT (UCD) from 22 miles west of Red Bluff, Tehama Co., California.

Range: Tehama and Shasta cos., California.

Caseya coxalis Loomis

Caseya coxalis Loomis, 1966, Proc. Biol. Soc. Washington, 79: 225, figs. 5-7. ♂ HT (USNM) from Davenport, Santa Cruz Co., California.

Range: Recorded from Santa Cruz and San Mateo cos., California.

Caseya dorada (Chamberlin)

Placerna dorada Chamberlin, 1941, Bull. Univ. Utah, 31(12): 10, figs. 19-21. ♂ HT (USNM) from nine miles north of Placerville, Eldorado Co., California.

Caseya dorada: Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 234, figs. 134, 139-142, 195.

Range: San Joaquin Valley and Sierra Nevada mountains, California (map, Gardner & Shelley, 1989, fig. 224).

Caseya douglasia (Chamberlin)

Zantona douglasia Chamberlin, 1941, Bull. Univ. Utah, 31(12): 11, figs. 22-24. ♂ HT (USNM) from "John Day Creek" [*sic*, = Days Creek], Douglas Co., Oregon.

Caseya douglasia: Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 229, figs.. 118, 123, 124, 184.

Range: Douglas, Jackson, and Curry cos., southwestern Oregon (map, Gardner & Shelley, 1989, fig. 223).

Caseya dendrogona Gardner & Shelley

Caseya dendrogona Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 244, figs. 149-151, 187, 188. ♂ HT (AMNH) from five miles east of McKenzie Bridge on Hy.242, Lane Co., Oregon.

Range: southwestern Oregon, recorded from Coos, Curry, Douglas, and Lane cos. (map, Gardner & Shelley, 1989, fig. 223).

Caseya guttata Gardner & Shelley

Caseya guttata Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 257, figs. 162, 163. ♂ HT (UCD) from four miles east of Sunny Brae, Humboldt Co., California.

Range: Humboldt Co., California, north to Curry Co., Oregon.

Caseya heteropa heteropa Cook & Collins

Caseya heteropus [*sic*!] Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 85, figs. 209-219. ♀ ST (USNM) from unknown locality in (possibly Marin Co.] California. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 260, figs. 431-433, 444.

Caseya dynotypa Chamberlin, 1947, Proc. Biol. Soc. Washington, 60: 9. ♀ HT (USNM) from Hastings reservation, Monterey Co., California. Synonymized by Gardner & Shelley, 1989.

Caseya heteropa heteropa: Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 260, figs. 1, 168-172, 202.

Range: Coastal central California (map, Gardner & Shelley, 1989, fig. 224).

Caseya heteropa disjuncta Gardner & Shelley

Caseya heteropa disjuncta Gardner & Shelley, 1989, Pan-Pacific Entom. 65: 262, figs. 111-117, 173-176, 201, 204. ♂ HT (UCD) from three miles west of Forestville, Sonoma Co., California.

Range: North of San Francisco Bay in Mendocino, Napa, Solano, Sonoma, and Yolo cos., California (map, Gardner & Shelley, 1989, fig. 224)..

Caseya heteropa montana Gardner & Shelley

Caseya heteropa montana Gardner & Shelley, 1989, Pan-Pacific Entom. 65: 264, figs. 179-183, 205. ♂ HT (UCD) from six miles south of El Dorado, El Dorado Co., California.

Range: Western slope of the Sierra Nevada in Butte, Colusa, Calaveras, El Dorado, Mariposa, and Tuolumne cos., California (map, Gardner & Shelley, 1989, fig. 224).

Caseya heteropa oraria Gardner & Shelley

Caseya heteropa oraria Gardner & Shelley, 1989, Pan-Pacific Entom. 65: 263, figs. 177, 178, 203. ♂ HT (UCD) from along Little Caspar Lake Road, five miles NE of Mendocino, Mendocino Co., California.

Range: Coastal northern California (Humboldt and Mendocino counties).

Caseya longiloba Gardner & Shelley

Caseya longiloba Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 247, figs. 164, 165, 207. ♂ HT (UCD) from 1.5 miles SW of Douglas City, Trinity Co., California.

Caseya megasoma Gardner & Shelley

Caseya megasoma Gardner & Shelley, 1989, Pan-Pacific Entom. 65: 252, figs. 160, 161, 209. ♂ HT (AMNH) from Oregon Hy. 34 at Benton-Lincoln co. line, Oregon.

Range: Benton, Lincoln, and Tillamook cos., Oregon.

Caseya occidentalis Gardner & Shelley

Caseya occidentalis Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 236, figs. 135, 144, 194. ♂ HT (UCD) from Del Puerto Canyon, 12 miles west of Patterson, Stanislaus Co., California.

Caseya paradoxa Gardner & Shelley

Caseya paradoxa Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 252, figs. 166, 167, 208. ♂ HT (UCD) from two miles east of Briceburg, Mariposa Co., California.

Caseya prionota Gardner & Shelley

Caseya prionota Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 238, figs. 138, 146, 197. ♂ HT (UCD) from 14 miles east of Briceburg, Mariposa Co., California.

Range: Fresno, Madera, and Mariposa cos.,California.

Caseya sequoia Chamberlin

Caseya sequoia Chamberlin, 1941, Bull. Univ. Utah, 31(12): 10, figs. 17, 18. ♀ HT (USNM) from Sequoia National Park, 12 miles northeast of Hammond, Tulare Co., California. – Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 239, figs. 137, 145, 196.

Caseya shastensis Gardner & Shelley

Caseya shastensis Gardner & Shelley, 1989, Pan-Pacific Entom. 65: 242, figs. 121, 129-131, 191. ♂ HT (UCD) from 18 miles west of Redding, Shasta Co., California.

Caseya similis Causey

Caseya similis Causey, 1952, Proc. Biol. Soc. Washington, 65: 113, figs. 6, 7. ♂ HT (USNM) from Clear Creek at Tehachapi Pass, Kern Co., California. – Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 266, figs. 212-214.

Caseya subtilis Gardner & Shelley

Caseya subtilis Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 243, figs. 152-155, 192. ♂ HT (UCD) from 7.7 miles SW of Cottage Grove, Douglas Co., Oregon.

Range: Douglas and Lane cos., Oregon.

Caseya taliae Gardner & Shelley

Caseya taliae Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 240, figs. 136, 143, 193. ♂ HT (UCD) from ten miles NE of Auberry, Fresno Co., California.

Range: Fresno and Madera cos., California.

Caseya westcotti Gardner & Shelley

Caseya westcotti Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 249, figs. 158, 159, 210, 211. ♂ HT (AMNH) from Millicoma Tree Farm, 14 miles east/ two miles south of Allegany, Coos Co., Oregon.

Range: West central Oregon (Coos, Douglas, Jackson, Lane, Lincoln cos.) (map, Gardner & Shelley, 1989, fig. 223).

Genus **Metopiona** Gardner & Shelley

Metopiona Gardner & Shelley, 1989, Pan-Pacific Entom. 65: 222. Type species: *M. sheari* Gardner & Shelley, by original designation.

One species, Oregon.

Metopiona sheari Gardner & Shelley

Metopiona sheari Gardner & Shelley, 1989, Pan-Pacific Entom. 65: 223, figs. 96-99. ♂ HT (AMNH) from Bishop Road, two miles north of Helvetia, Washington Co., Oregon.

Genus **Ochrogramma** Gardner & Shelley

Ochrogramma Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 194. Type species: *O. formosula* Gardner & Shelley, by original designation.

Four species, northern California, southwestern Oregon.

Ochrogramma bentona (Chamberlin)

Caseya bentona Chamberlin, 1952, Chicago Acad. Sci. Nat. Hist. Misc. 113: 2, figs. 3-6. ♂ HT (USNM) from Mary's Peak, Benton Co., Oregon.

Ochrogramma bentona: Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 197, figs. 22, 23, 25-27, 33, 37-44.

Range: Coastal Oregon, recorded from numerous localities in Washington, Lincoln, Benton, Douglas, Lane, Coos, and Polk cos. (map, Gardner & Shelley, 1989, fig. 220).

Ochrogramma formosula Gardner & Shelley

Ochrogramma formosula Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 201, figs. 20, 30, 31, 35, 36, 45-48. ♂ HT (UCD) from two miles SE of Gates, Linn Co., Oregon.

Range: Northwestern Oregon (Lane, Linn, Marion, Multnomah cos.) (map, Gardner & Shelley, 1989, fig. 220).

Ochrogramma haigi Gardner & Shelley

Ochrogramma haigi Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 199, figs. 21, 28, 29. ♂ HT (UCD) from five miles SW of Gasquet on Hy. 199, Del Norte Co., California.

Range: Del Norte Co., California and Curry Co., Oregon.

Ochrogramma heterogona Gardner & Shelley

Ochrogramma heterogona Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 195, figs. 24, 32. ♂ HT (AMNH) from Cape Lookout State Park, Tillamook Co., Oregon.

Genus **Opiona** Chamberlin

Opiona Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc., 87: 8. Type species: *O. columbiana* Chamberlin, by original designation. – Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 203.

Thirteen, one with three subspecies, coastal central California, western Oregon, Puget Sound region.

Opiona berryessae Gardner & Shelley

Opiona berryessae Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 210, figs. 64-66, 109. ♂ HT (UCD) from 12 miles west of Winters, Napa Co., California.

Opiona bifurcata Gardner & Shelley

Opiona bifurcata Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 209, figs. 60-63. ♂ HT (UCD) from Russian Gulch State Park, two miles north of Mendocino, Mendocino Co., California.

Opiona casualis Gardner & Shelley

Opiona casualis Gardner & Shelley, 1989, Pan-Pacific Entom. 65: 216, figs. 49-52, 76-78, 107. ♂ HT (UCD) from two miles east of Valsetz, Polk Co., Oregon.

Range: Lincoln and Polk cos., Oregon.

Opiona columbiana Chamberlin

Opiona columbiana Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc. 87: 81, figs. 15-19. Location of ♂ HT unknown (a ♀ PT is at PMBC), from Victoria, Vancouver Island, British Columbia. – Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 215, figs. 85-87, 103.

Opiona hatchi Causey, 1954, Ann. Ent. Soc. America, 47: 81, figs. 1-3. ♂ HT (AMNH) from Seattle, King Co., Washington. Synonymized by Gardner & Shelley, 1989.

Range: Periphery of Puget Sound, Washington and British Columbia.

Opiona communis communis Gardner & Shelley

Opiona communis communis Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 212, figs. 70-72, 100. ♂ HT (UCD) from three miles north of Kenwood, Sonoma Co., California.

Range: Santa Cruz, Solano, and Sonoma cos., California.

Opiona communis angusta Gardner & Shelley

Opiona communis angusta Gardner & Shelley, 1989, Pan-Pacific Entom. 65: 214, figs. 67-69. ♂ HT (UCD) from six miles SSE of Santa Rosa, on Bennett Valley Road, Sonoma Co., California.

Range: Coastal California north of San Francisco (Marin and Sonoma cos.).

Opiona communis prolixa Gardner & Shelley

Opiona communis prolixa Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 214, figs. 73-75. ♂ HT (UCD) from seven miles west of Oakville, Napa Co., California.

Range: Sonoma and Napa cos., California.

Opiona confusa Gardner & Shelley

Opiona confusa Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 207, figs. 54-56, 106. ♂ HT (UCD) from 12 miles SE of Kernville, Lincoln Co., Oregon.

Opiona distincta Gardner & Shelley

Opiona distincta Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 209, figs. 58-59, 101. ♂ HT (UCD) from 2.5 miles SE of Guerneville, Sonoma Co., California.

Opiona exigua Gardner & Shelley

Opiona exigua Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 217, figs. 82-84, 110. ♂ HT (UCD) from Russian Gulch State Park, Mendocino Co., California.

Range: Mendocino and Sonoma cos., California.

Opiona facetia Gardner & Shelley

Opiona facetia Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 219, figs. 53, 88-90. ♂ HT (UCD) from Outlook, Clackamas Co., Oregon.

Range: Clackamas and Marion cos., Oregon.

Opiona fisheri Gardner & Shelley

Opiona fisheri Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 220, figs. 93-95, 102, 104, 105. ♂ HT (UCD) from Neptune State Park, Lane Co., Oregon.

Range: Lane and Lincoln cos., Oregon.

Opiona goedeni Gardner & Shelley

Opiona goedeni Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 214, figs. 67-69. ♂ HT (AMNH) from 1.7 miles SW of Timber, Washington Co., Oregon.

Range: Clatsop, Polk, and Washington cos., Oregon.

Opiona scytonotoides Gardner & Shelley

Opiona scytonotoides Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 220, figs. 91, 92, 92a. ♂ HT (AMNH) from Hy. 227 at Canyonville Park, two miles east of Canyonville, Douglas Co., Oregon.

Opiona siliquae Causey

Opiona siliquae Causey, 1963, Wasmann Journ. Biol.21: 197, figs. 5-8. ♂ HT (USNM) from Fault

Rock Cave, Mendocino Co., California. – Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 208, figs. 215- 218.

Genus **Speoseya** Causey

Speoseya Causey, 1954, Wasmann Journ. Biol. 21: 194. Type species: *S. grahami* Causey, by original designation.

One species, California.

Speoseya grahami Causey

Speoseya grahami Causey, 1963, Wasmann Journ. Biol. 21: 194, figs. 1-4. ♂ HT (USNM) from Shaw's Cave, Calaveras Co., California.

Genus **Underwoodia** Cook & Collins

Underwoodia Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 79. Type species: *U. polygama*Cook & Collins, by original designation. – Shelley, 1993, Canadian Journ. Zool., 71: 169 (revision).

Two species, northern North America; one, Russian Far East.

Underwoodia iuloides (Harger)

Trichopetalum iuloides Harger, 1872, American Journ. Sci. Arts, 4: 118. ♀ ST (PMNH) from Simon's Harbor, Pukaskwa National Park, Ontario.

Underwoodia iuloides Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 83, figs. 177-179. – Shelley, 1993, Canadian Journ. Zool., 71: 171, figs. 1-8.

Underwoodia polygama: Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 80, figs. 180-190. ♂ HT (USNM) from Huntington, Nassau Co., New York. Synonymized by Shelley, 1993.

Range: Northern North America from Newfoundland to Manitoba, south to New York and Michigan; a disjunct population in northeastern New Mexico (map, Shelley, 1993, fig. 11).

Underwoodia tida Chamberlin

Underwoodia tida Chamberlin, 1925, Pan-Pacific Entom., 2: 62. ♀ HT (USNM) from Logan Canyon, Cache Co., Utah. – Shelley, 1993, Canadian Journ. Zool., 71: 173, fig. 9.

Underwoodia hespera Chamberlin, 1925, Pan-Pacific Entom., 2: 63. ♀ HT (USNM) from Mill Creek Canyon, Salt Lake Co., Utah. Synonymized by Shelley, 1993.

Range: Northwestern North America, from Juneau, Alaska, south through the Cordilleran chain as far as northern Utah (map, Shelley, 1993, fig. 11).

Genus **Vasingtona** Chamberlin

Vasingtona Chamberlin, 1941, Bull. Univ. Utah, 31(12): 12. Type species: *Caseya fasciata* Chamberlin, 1941, by original designation. – Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 187.

One species, British Columbia to Oregon.

Vasingtona irritans (Chamberlin)

Caseya irritans Chamberlin, 1910, Ann. Ent., Soc. America, 4: 241, pl. 34, figs. 6-9, pl. 35, fig. 1. ♀ HT (USNM) from Portland, Multnomah Co., Oregon.

Caseya fasciata Chamberlin, 1941, Bull. Univ. Utah, 31(11): 22. ♂ HT (USNM) from Arlington, Snohomish Co., Washington. Synonymized by Gardner & Shelley, 1989.

Vasingtona fasciata: Chamberlin, 1941, Bull. Univ. Utah, 31(12): 12.

Vasingtona irritans: Gardner & Shelley, 1989, Pan-Pacific Entom., 65: 188, figs. 2-19.

Range: Extreme southwestern British Columbia, south to central western Oregon; one disjunct cave population in Harney Co., Oregon (map, Gardner & Shelley, 1989, fig. 220).

Family Urochordeumatidae Silvestri

Urochordeumidae Silvestri, 1909, Rend. Atti Accad. Lincei, 18: 230; 1913, Boll. Lab. Zool. Gen. Agr. Portici, 7: 303. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 260.

Urochordeumatidae Jeekel, 1971, Monogr. Nederlandse Entom. Ver., 5: 83.

One genus, northwestern North America (Washington State).

Genus **Urochordeuma** Silvestri

Urochordeuma Silvestri, 1913, Rend. Atti Accad. Lincei, 18: 230; 1913, Boll. Lab. Zool. Gen. Agr. Portici, 7: 303. Type species: *U. bumpusi* Silvestri, by monotypy.

Two nominal species, Washington State.

Urochordeuma bumpusi Silvestri

Urochordeuma bumpusi Silvestri, 1909, Rend. Atti Accad. Lincei, 18: 230; 1913, Boll. Lab. Zool. Gen. Agr. Portici, 7: 303, figs. I, 1-10, II, 1-10, III, 1-5 ♂ HT (LEAP) from Longmire Springs, near Tacoma, Pierce Co., Washington.

Urochordeuma porona Chamberlin

Urochordeuma porona Chamberlin, 1941, Bull. Univ. Utah, 31(11): 23, figs. 45, 46. ♂ HT (USNM) from Snoqualmie Pass, King Co., Washington. – Shear, 1972, Bull. Mus. Comp. Zool., 144: 260, figs. 445-450.

Chordeumatida of uncertain family position

Polydesmus ocellatus Packard

Polydesmus ocellatus Packard, 1883, American Nat., 17: 428. Location of type unknown, from "Oregon."

Craspedosoma packardii Stuxberg, 1885, American Nat., 19: 400. Invalid replacement name.

Trichopetalum (?) ocellatum: Cook & Collins, 1895, Ann. New York Acad. Sci., 9: 68, figs. 30-35.

The provenance and small size of this species suggest it may be a rhiscosomidid.

Order Polydesmida

The current recognition of four suborders, essentially the three "phyla" defined by Brolemann in 1916 + a fourth to contain dalodesmids, is not entirely satisfactory. In particular, the characters used to distinguish the suborder Paradoxosomatidea are not as fixed as originally believed, and it is not impossible that some alternative arrangement based on new characters can be devised. For the present, I maintain the system used in my 1980 classification, with reservations and a few changes (e.g., composition of Platyrhacidae).

Suborder Chelodesmidea

With only a few points of uncertainty, I think that this taxon as defined on the basis of moveable gonopod coxae and sternum of the 2nd pair of male legs pivoted upon the pleurotergum is relatively discrete and perhaps even monophyletic. The relationships of the various families however remains unresolved despite some efforts in recent years to locate convincing synapomorphies. I suspect that any clues are either so obvious as to be overlooked, or so obscure as to have remain undetected.

The use of superfamilies in the 1980 list was probably premature, although in general they seemed to represent groupings of similar families. Except for Euryuridae, the following sequence of families remains that of the "Classification", rather than strict alphabetical order, which, however, is observed for infrafamilial taxa to the extent that they have been established.

Family Chelodesmidae Cook

Chelodesmidae Cook, 1895, Ann. New York Acad. Sci., 9: 4. – Hoffman, 1980, Classification of the Diplopoda, p.151.

Leptodesminae Attems, 1898, Denkschr. Akad. Wien, 67: 369.

Leptodesmidae (in part) Attems, 1938, Das Tierreich, 69: 1-201..

Eurydesmidae sensu auct., nec sensu *Eurydesminae* Attems, 1898.

Since 1980, some progress has been made in the definition of tribal groups within this vast assemblage of millipeds, but most involves the fauna of South America and only a few items are germane to the region covered by this list. In particular, the rich fauna of the Greater Antilles remains unassigned although preliminary studies suggest affinity with that of the Andes rather than of Central America. I continue use of the two subfamily dichotomy for the present, with the realization that this is surely an oversimplification of the actual picture.

Subfamily Chelodesminae Cook

Chelodesminae Hoffman, 1980, Classification of the Diplopoda (nomen translatum ex family Chelodesmidae Cook, 1895).

Tribe Batodesmini Cook

Batodesmini Cook, 1896, Brandtia, 4: 17. – Hoffman, 1969, Pap. Avuls. Zool. Sao Paulo, 22: 265 (synopsis).

Biporodesminae Verhoeff, 1941, Arch. Naturgesch. 10: 403..

Genus **Alocodesmus** Silvestri

Alocodesmus Silvestri, 1896, Boll. Mus. Zool. Anat. Comp. Torino, 11(254): 5. Type species: *A. angustatus* Silvestri, by monotypy.– Carl, 1914, Mém. Soc. Neuchâteloise, 5: 896.

Four species, Panama, Colombia (undescribed species occur north to Honduras).

Alocodesmus angustatus Silvestri

Alocodesmus angustatus Silvestri, 1896, Boll. Mus. Zool. Anat. Comp. Torino, 11(254): 5, fig. 5. ♂ HT (MZUT) from Punta Sabana, Darien Province, Panama. – Carl, 1914, Mém. Soc. Neuchâteloise, 5: 897, fig. 123.

Alocodesmus dromeus Chamberlin

Alocodesmus dromeus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 48, pl. 18, figs. 4-7. ♂♀ ST

(USNM) from Culebra, Canal Zone, Panama. Synonymized with *angustatus* by Attems, 1938.

I have been unable to match the gonopods of specimens from the Canal Zone with the drawing made by Carl (1914: fig. 123) from the holotype of *angustatus*. Unless the latter was made from a slide-mounted and distorted gonopod, I see no course but to recognize two valid taxa at least provisionally, until the genus can be carefully revised.

Genus **Cheirogonus** Hoffman

Cheirogonus Hoffman, 1982, Journ. Nat. Hist., 16: 651. Type species: *C. pittieri* Hoffman, by original designation.

One species: Panama.

Cheirogonus pittieri Hoffman

Cheirogonus pittieri Hoffman, 1982, Journ. Nat. Hist., 16: 651, figs. 42-45. ♂ HT (USNM) from Los Siguas, Prov. Chiriquí, Panama.

BATODESMINI OF UNCERTAIN GENERIC POSITION

Leptodesmus oltramarei Carl, 1902, Rev. Suisse Zool., 10: 600, fig. 34. ♂ ST (MHNG) labeled only "Guatemala".

This species almost certainly requires establishment of a new genus in this tribe. It may be related to *Cheirogonus*.

Tribe Caraibodesmini Hoffman

Caraibodesmini Hoffman, 1979, Myriapodologica , 1(2): 12.

Genus **Caraibodesmus** Chamberlin

Caraibodesmus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 233. Type species: *C. bruesi* Chamberlin, by original designation. – Hoffman, 1979, Myriapodologica 1(2): 12. – Loomis, 1975, Florida Entom., 58: 173 (key to 10 species).

11 species, all endemic to Jamaica.

Caraibodesmus acutipes Loomis

Caraibodesmus acutipes Loomis, 1975, Florida Entom., 58: 174, fig. 5. ♂ HT (FSCA) from one mile south of Claremont, St. Ann Parish, Jamaica.

Caraibodesmus bruesi Chamberlin

Caraibodesmus bruesi Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 233. ♂ HT (MCZ) from "Liguanea Plain" (a district in eastern Kingston), St. Andrew Parish, Jamaica. – Loomis, 1941, Psyche, 48: 39, fig. f (gonopod drawing from holotype).

Caraibodesmus criniger Loomis

Caraibodesmus criniger Loomis, 1937, Bull. Mus. Comp. Zool., 80: 222, fig. 12. ♂ HT (MCZ) from "Main Ridge, Blue Mts., Jamaica, 5000-7000 feet" , presumably the vicinity of Blue Mountain Peak, on the boundary betwen St. Thomas and Portland parishes.

Range: Higher elevations in the Blue Mountains, Jamaica. The record (Loomis, 1975) for Mount Diablo, St. Ann Parish, seems improbable, perhaps a mislabeled sample.

Caraibodesmus formosus (Pocock)

Odontopeltis formosus Pocock, 1894, Journ. Linnean Soc. London, 24: 517, pl. 39, fig. 7. ♂ HT (BMNH) from Mandeville, Manchester Parish, Jamaica.

Caraibodesmus lewisi Hoffman

Caraibodesmus lewisi Hoffman, 1979, Myriapodologica, 1(2): 14, figs. 1-5. ♂ HT (VMNH) from Corn Puss Gap, ca 5 km northwest of Bath, St. Thomas Paroish, Jamaica.

Known also from Barnett's Gap, , St. Thomas Parish, west of the type locality in the Blue Mountains.

Caraibodesmus mammatus (Pocock)

Odontopeltis mammatus Pocock, 1894, Journ. Linnean Soc. London, 24: 518, pl. 30, figs. 8-8b. ♂ HT from Mandeville, Manchester Parish, Jamaica.

Caraibodesmus morantus (Karsch)

Polydesmus (Rhacophorus) morantus Karsch, 1881, Arch. Naturg. 47: 39. ♀ HT (ZMB) labeled only "Jamaica" without further locality.

Caraibodesmus pellus Chamberlin

Caraibodesmus pellus Chamberlin, 1918, Bull. Mus. Comp. Zool. 62: 234. ♀ HT (MCZ) from "Liguanea Plain" [in Kingston], St. Andrew Parish, Jamaica.

Caraibodesmus pictus Loomis

Caraibodesmus pictus Loomis, 1969, Florida Entom., 52: 141, figs. 1,2. ♂ HT (USNM) from Oxford Cave at Auchtembeddie, Manchester Parish, Jamaica.

Caraibodesmus sculpturatus Loomis

Caraibodesmus sculpturatus Loomis, 1975, Florida Entom., 58: 174, fig. 6. ♂ HT (FSCA) from Mount Diablo, Moneague, St. Ann Parish, Jamaica.

Caraibodesus verrucosus (Pocock)

Odontopeltis verrucosus Pocock, 1894, Journ. Linnean Soc. London, 24: 516, pl. 39, figs. 6-6d. ♂ HT (BMNH) from "Jamaica" without further locality.

Genus **Platyurodesmus** Loomis

Platyurodesmus Loomis, 1977, Florida Entom., 60: 22. Type species: *P. parallelus* Loomis, by original designation. – Hoffman, 1979, Myriapodologica, 1(2): 16.

One species, endemic on Jamaica.

Platyurodesmus parallelus Loomis

Platyurodesmus parallelus Loomis, 1977, Florida Entom., 60: 24, figs. 4-6. ♂ HT (FSCA) from Jackson Bay Cave, Clarendon Parish, Jamaica.– Hoffman, 1979, Myriapodologica 1(2): 17, figs. 6-9.

Tribe Chondrodesmini Hoffman

Chondrodesmini Hoffman, 1978, Rev. Suisse zool., 85: 543; 1997, Myriapodologica, 5: 6 (revised key to genera).

Six genera, southern Mexico to Peru, northern Brasil, and Guyana.

Genus **Chondrodesmus** Silvestri

Chondrodesmus Silvestri, 1897, Boll. Mus. Zool. Anat. Comp. Torino, 12(305): 13. Type species, *C. armatus* Silvestri, by monotypy. – Attems, 1938, Das Tierreich, 69: 74 (key to then-known species). – Loomis, 1972, Florida Entom., 55: 186 (key to Costa Rican species).

Dirhabdophallus Pocock, 1909, Biol. Centr.-Amer., Diplop., 161. Type species: *D. montanus* Pocock, by original designation.

About 40 species, Vera Cruz and Guerrero south to Ecuador and Brazil.

Chondrodesmus acanthurus (Peters)

Polydesmus (Oxyurus) acanthurus Peters, 1864, Montansb. Akad. Wissensch. Berlin, p. 532. ♀ HT (ZMB) labeled only "Veragua" (presumably Veraguas Province, Panama).

Chondrodesmus acanthurus: Carl, 1914, Mém. Soc. Neuchâteloise, 5: 888, fig. 115.

Range: No definite localities have been established for this enigmatic species.

Chondrodesmus acuticollis Attems

Chondrodesmus acuticollis Attems, 1931, Zoologica (Stuttgart), 79: 47, figs. 69, 70. ♂ HT (ZMH) from Acajutla, El Salvador. – Kraus, 1954, Senckenberg. Biol., 35: 310.

Range: El Salvador. A record for Costa Rica (Attems, 1933) requires verification.

Chondrodesmus alidens Chamberlin

Chondrodesmus alidens Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 46, pl. 17, figs. 7-9. ♀ HT (USNM) from La Ceiba, Dept. Atlantida, Honduras.

Chondrodesmus allenae Loomis

Chondrodesmus alleni Loomis, 1959, Ceiba, 8(2): 2, fig. 1. ♂ HT (USNM) from Escuela Agricola Pan-americana, Zamorano, Honduras.

Chondrodesmus allenae: Loomis 1968, Bull. U. S. Nat. Mus. 266: 12.

Chondrodesmus atrophus Chamberlin

Chondrodesmus atrophus Chamberlin, 1925, Proc. Biol. Soc. Washington, 38: 42. ♀ HT (MCZ) from Fort Sherman, Canal Zone, Panama.

Chondrodesmus cairoensis Loomis

Chondrodesmus cairoensis Loomis, 1972, Florida Entom., 55: 186, Fig. 1. ♂ HT (USNM) from Cairo, Prov. Limón, Costa Rica.

Chondrodesmus chamberlini Hoffman

Chondrodesmus panamenus Chamberlin, 1925, Proc. Biol. Soc. Washington, 38: 42. ♀ HT (MCZ) from Barro Colorado Island, Canal Zone, Panama. Preoccupied by *Chondrodesmus panamenus* Chamberlin, 1922.

Chondrodesmus chamberlini Hoffman, 1950, Proc. Biol. Soc. Washington, 63: 70. New name for *Chondrodesmus panamenus* Chamberlin, 1925.

Loomis (1968: 12) apparently felt that both of the *panamenus* names proposed by Chamberlin were based on the same species. Although the 1925 description is very brief, it nonetheless mentions enough differences in detail to warrant maintaining the names as valid until their types have been directly compared.

Chondrodesmus ensiger (Pocock)

Dirhabdophallus ensiger Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 165, pl. 12, fig. 7, pl. 13, fig. 1. Location of type material unknown, probably lost, from Omilteme [=Omiltemi, ca

18 miles west of Chilpancingo] and Xautipa, Guerrero, Mexico. Omiltemi is suggested as the restricted type locality.

Chondrodesmus ensiger: Attems, 1938, Das Tierreich, 69: 86.

Chondrodesmus euliotus Chamberlin

Chondrodesmus euliotus Chamberlin, 1933, Pan-Pacific Entom., 9: 21, figs. 4, 5. ♂ HT (USNM) from Chitaria, Prov. Cartago, Costa Rica.

Chondrodesmus falciphallus Chamberlin

Chondrodesmus falciphallus Chamberlin, 1933, Pan-Pacific Entom., 9: 20, pl. 17, figs. 1-6. ♂ HT (USNM) from Parismina, Prov. Limón , Costa Rica.

Chondrodesmus granosus (Carl)

Leptodesmus plataleus granosus Carl, 1902, Rev. Suisse Zool., 10: 602, fig. 27. ♂ HT (MHNG) from San José, Costa Rica.

Dirhabdophallus granosus: Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 164, pl. 12, fig. 5.

Chondrodesmus hoffmanni (Peters)

Rhacophorus hoffmanni Peters, 1864, Monatsb. Akad. Wiss. Berlin, p. 537. ♀ HT (ZMB) from Costa Rica, without closer locality.

Dirhabdophallus hoffmanni Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 165.

Chondrodesmus hoffmanni: Chamberlin, 1922, Proc. U. S. Nat. Mus. 60(8): 48.

Chondrodesmus montanus (Pocock)

Dirhabdophallus montanus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 163, pl. 12, figs. 4-4g, pl. 13, fig. 2. Location of type material unknown, probably lost, from Volcán de Agua, Dept. Sacatepequez, Guatemala.

Chondrodesmus montanus: Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 47.

Range: Recorded from several localities in El Salvador (Kraus, 1954).

Chondrodesmus murphyi Chamberlin

Chondrodesmus murphyi Chamberlin, 1946, Pan-Pacific Entom, 42: 147, fig. ♂ HT (USNM) from Isla San Josè, Archipielago de las Perlas, Panama.

Chondrodesmus nannus Chamberlin

Chondrodesmus nannus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 58, fig. 137. ♂ HT (USNM) from Chilpancingo, Guerrero, Mexico.

Chamberlin provided no insights how this species differed from *C. ensiger,* of which it is almost certainly a junior synonym.

Chondrodesmus orientalis Kraus

Chondrodesmus orientalis Kraus, 1954, Senckenberg. Biol., 35: 309, figs. 28-29. ♂ HT (SMF) from Conchagua, Depto La Union, El Salvador.

Range: Deps. La Union and San Miguel, El Salvador.

Chondrodesmus panamenus Chamberlin

Chondrodesmus panamenus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 46, pl. 10, pl. 18, figs. 1-3. ♀ HT (MCZ), from "Panama", without further locality.

Chondrodesmus pittieri Loomis

Chondrodesmus pittieri Loomis, 1961, Proc. U. S. Nat. Mus., 113: 83, figs. 1k-l. ♂ HT (USNM) from Puerto Obaldia, Prov. San Blas, Panama.

Chondrodesmus rodriguezi (Brolemann)

Leptodesmus rodriguezi Brolemann, 1900, Mém. Soc. zool. France, 13: 103, figs. 43-46. ♂ HT (MHNP), from "Guatemala" without further locality.

Chondrodesmus rodriguezi: Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 47.

Chondrodesmus nicaraguae Chamberlin, 1924, Ent. News, 35: 174, fig. 1. ♂ HT (MCZ) from "Nicaragua" without further locality. Synonymized by Loomis, 1950.

Synonymy of *nicaraguae* with *rodriguezi* must be considered provisional pending comparison of type material of the two names.

Recorded for Purulhá, Guatemala by Pocock (1909: 164).

Chondrodesmus sabachanus Chamberlin

Chondrodesmus sabachanus Chamberlin, 1938, Carnegie Inst. Washington Publ. 491, p.74, figs. 29-31. ♀ HT (USNM) from Sabacha Cave at Tekax, Yucatan, Mexico.

Chondrodesmus singularis Chamberlin

Chondrodesmus singularis Chamberlin, 1922, Proc. U. S. Nat. Mus. 60(8): 44, pl. 16, figs. 10-13. ♀ HT (MCZ) from Puerto Limón, Limón Prov., Costa Rica.

Chondrodesmus spatulatus (Pocock)

Dirhabdophallus spatulatus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 165, pl. 12, fig. 6. Location of M HT unknown, probably lost, from "Omilteme" [=Omiltemi], 18 mi. west of Chilpanzingo, Guerrero, Mexico.

Chondrodesmus tuberculifer Chamberlin

Chondrodesmus tuberculifer Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 45, pl. 17, figs. 1-6. ♂ HT (USNM) from La Ceiba, Dep. Atlantida, Honduras.

Tribe Trichomorphini Hoffman

Trichomorphini Hoffman, 1979, Contrib. Sci. Natur. Hist. Mus. Los Angeles County, 305: 5; 1980, Classification of the Diplopoda, p. 153.

Seven genera, Costa Rica to Ecuador and Trinidad.

Genus **Allarithmus** Attems

Allarithmus Attems, 1933, Ann. Naturh. Mus. Wien, 46: 265. Type species: *A. parvulus* Attems, by monotypy. Synonymized with *Phylactophallus* by Loomis (1968); reinstated as valid by Hoffman (1979).

One species, Costa Rica.

Allarithmus parvulus Attems

Allarithmus parvulus Attems, 1933, Ann. Naturh. Mus. Wien, 46: 265, figs. 12-16. ♂ HT (NMW) from Volcan Irazu, Prov. Cartago, Costa Rica.

Range: Also reported from San Isidro and La Carpintera, Costa Rica, by Attems (1933).

Genus **Loomisiola** Hoffman

Loomisiola Hoffman, 1979, Contr. Sci. Natur. Mus. Los Angeles County, 305: 5. Type species: *Trichomorpha crinitapes* Loomis, 1972, by original designation.

One species, Costa Rica.

Loomisiola crinitapes (Loomis)

Trichomorpha crinitapes Loomis, 1972, Florida Entom, 55: 190, figs. 8-9. ♂ HT (USNM) from Cairo, Prov. Limón, Costa Rica.

Loomisiola crinatipes: Hoffman, 1979, Contr. Sci. Natur. Mus. Los Angeles County, 305: 5.

Genus **Phylactophallus** Pocock

Phylactophallus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 166. Type species: *P. stenomerus* Pocock, by original designation.

Isidrona Attems, 1933, Ann. Naturh. Mus. Wien, 46: 267. Type species: *I. forficula* Attems, by monotypy. Considered congeneric with *Phylactophallus* by Hoffman (1979).

Three (?two) species, Costa Rica.

Phylactophallus canceripes Loomis

Phylactophallus canceripes Loomis, 1972, Florida Entom., 55: 188, figs. 2-4. ♂ HT (USNM) from Volcán Irazu ["above San Isidro": Loomis], Cartago Prov., Costa Rica.

The generic position of this species is doubtful, a restudy of the type is required.

Phylactophallus stenomerus Pocock

Phylactophallus stenomerus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 166, pl. 13, figs. 3-3h.Location of type material unknown, probably lost, from Volcán Irazu, Prov. Cartago, Costa Rica.

Isidrona forficula Attems, 1933, Ann. Naturh. Mus. Wien, 46: 268, figs. 17-20. ♂ HT (NMW) from San Isidro, Prov. Cartago?, Costa Rica. **New Synonymy!**

Comparison of the published accounts of the two names cited above leave little doubt that both are based on specimens of the same species. Pocock's presentation is excellent even by today's standards.

Genus **Talamancia** Loomis

Talamancia Loomis, 1974, Florida Entom., 57: 170. Type species: *T. alba* Loomis, by original designation.

One species, Costa Rica.

Talamancia alba Loomis

Talamancia alba Loomis, 1974, Florida Entom., 57: 170, figs. 1-3. ♂ HT (FSCA) from Inter-American Hwy on west side of Cerro de la Muerte, 8,5000 ft., San José Prov., Costa Rica.

Genus **Trichomorpha** Silvestri

Trichomorpha Silvestri, 1897, Boll. Mus., Zool. Anat. Comp. Torino, 12 (305): 11. Type species: *T. elegans* Silvestri, by monotypy. – Attems, 1938, Das Tierreich, 69: 107 (key to then-known species). – Loomis, 1964, Fieldiana Zoology, 47: 17 (key to species known from Panama); 1972, Florida Entom., 55: 00 (key to species known from Costa Rica).

Ethophallus Chamberlin, 1933, Pan-Pacific Entom., 9: 20. Type species: *E. cervantes* Chamberlin, by original designation. Synonymized by Loomis (1972) and by Hoffman (1979), after recognition by Loomis (1974).

Typophallus Chamberlin, 1940, Bull. Univ. Utah, 30(9)): 10. Type species: *T. evidens* Chamberlin, by original designation. Synonymized by Loomis (1964).

Desmachrides Chamberlin, 1940, Bull. Univ. Utah, 30(9): 11. Type species: *D. dichrus* Chamberlin, by original designation. Synonymized by Loomis (1964).

About 40 nominal species, Costa Rica to Ecuador and Colombia.

Trichomorpha agilis Loomis

Trichomorpha agilis Loomis, 1972, Florida Entom., 55: 190, figs. 5-7. ♂ HT (USNM) from Cairo, Prov. Limón, Costa Rica.

Trichomorpha capillata Loomis

Trichomorpha capillata Loomis, 1964, Fieldiana Zoology, 47: 17, figs. 1, l-m. ♂ HT (FMNH) from west of Finca Palo Santo, near Nueva California, Prov. Chiriquí, Panama.

Trichomorpha cervantes (Chamberlin)

Ethophallus cervantes Chamberlin, 1933, Pan-Pacific Entom., 9:20. ♂ HT (USNM) from Cervantes, Prov. Cartago, Costa Rica.

Trichomorpha cervantes: Loomis, 1972, Florida Entom., 55: 190.

Trichomorpha crucicola Hoffman

Trichomorpha gracilis Loomis, 1974, Florida Entom., 57: 172, fig. 6. ♂ HT (FSCA) from Finca Las Cruces, San Vito, Puntarenas Prov., Costa Rica. Preoccupied by *Trichmorpha gracilis* Carl, 1914.

Trichomorpha crucicola Hoffman, 1979, Contr. Sci. Natur. Mus. Los Angeles County, 305: 4.

Trichomorpha erosa Loomis

Trichomorpha erosa Loomis, 1972, Florida Entom., 55: 191, figs. 10, 11. ♂ HT (USNM) from Cairo, Prov. Limon, Costa Rica.

Trichomorpha esulcata Loomis

Trichomorpha esulcata Loomis, 1975, Florida Entom., 57: 171, figs. 4,5. ♂ HT (FSCA) from Finca Las Cruces, near San Vito, Prov. Puntarenas, Costa Rica.

Trichomorpha evidens (Chamberlin)

Typophallus evidens Chamberlin, 1940, Bull. Univ. Utah, 30(9): 11. ♂ HT (USNM) from Barro Colorado Island, Canal Zone, Panama.

Trichomorpha fratellus: Chamberlin, 1947, Proc. Biol. Soc. Washington, 60: 64, figs. 5-8 ♂ HT

(USNM) from Summit, Canal Zone, Panama. Synonymized with *evidens* by Loomis (1964).

Trichomorpha evidens: Loomis, 1964, Fieldiana:Zoology, 47: 18.

Trichomorpha folia (Brolemann)

Leptodesmus folium Brolemann, 1903, Ann. Soc. Entom. France, 72: 139, figs. 8-10, 13-18. ♂ HT (MHNP) from Cocos Island, Costa Rica.

Camptomorpha folium: Attems, 1938, Das Tierreich, 69: 73, fig. 86.

Trichomorpha folium: Loomis, 1968, Bull. U. S. Nat. Mus. 266: 16.

Trichomorpha hyla Hoffman

Trichomorpha hyla Hoffman, 1979, Contr. Sci. Natur. Mus. Los Angeles County, 305: 4, figs. 1-8. ♂ HT (LACM) from Wafer Bay, Cocos Island, Costa Rica.

Trichomorpha inflecta Loomis

Trichomorpha inflecta Loomis, 1972, Florida Entom., 55: 192, figs. 12-14. ♂ HT (USNM) from Cairo, Prov. Limón, Costa Rica.

Trichomorpha nidicola Chamberlin

Trichomorpha nidicola Chamberlin, 1925, Proc. Biol. Soc. Washington, 38, 42. F HT (MCZ) from Barro Colorado Island, Canal Zone, Panama.

Trichomorpha extrema Chamberlin, 1925, Proc. Biol. Soc. Washngton, 38: 43. F HT (MCZ) from Barro Colorado Island, Canal Zone, Panama. Synonymized with *nidicola* by Loomis, 1964.

Trichomorpha panamica Chamberlin

Trichomorpha panamica Chamberlin, 1925, Proc. Biol. Soc. Washington, 38: 43. ♂ HT (MCZ) from Barro Colorado Island, Canal Zone, Panama.

Trichomorpha recta Chamberlin, 1925, Proc. Biol. Soc. Washington, 38: 43. ♀ HT (MCZ) from Barro Colorado Island, Canal Zone, Panama. Synonymized with *panamica* by Loomis, 1964.

Desmacrides dichrus Chamberlin, 1940, Bull. Univ. Utah, 30(9): 12. ♂ HT (USNM) from Barro Colorado Island, Canal Zone, Panama. Synonymized with *panamica* by Loomis, 1964.

Trichomorpha kraussii Chamberlin, 1947, Proc. Biol. Soc. Washington, 60: 63, figs. 1-4. ♂ HT (USNM) from Summit, Canal Zone, Panama.

Range: Panama and Coclé provinces and Canal Zone, Panama.

Trichomorpha tacarcuna Loomis

Trichomorpha tacarcuna Loomis, 1964, Proc. Biol. Soc. Washington, 77: 182, figs. 1-3. ♂ HT (USNM) from Rio Tacarcuna, ca 30 km east of El Real, Prov. Darien, Panama.

Tribe Lepturodesmini Hoffman

Lepturodesmini Hoffman, 1975, Stud. Neotrop. Fauna, 10: 184 (synopsis of tribe, with key to four genera).

Six genera, northern South America to Costa Rica and ?Mexico. The two Mesamerican genera may require reference to some other tribe upon further study.

Genus **Rhaphandra** Loomis

Rhaphandra Loomis, 1966, Ann. Entom. Soc. America, 59: 12. Type species: *R. brunnea* Loomis, by original designation.One species, Oaxaca.

Rhaphandra brunnea Loomis

Rhaphandra brunnea Loomis, 1966, Ann. Entom. Soc. America, 59: 12, figs. 1-3. ♂ HT (SMUK) from six miles west of Zanatepec, Oaxaca, Mexico.

Genus **Solaenorhabdus** Hoffman

Solaenorhabdus Hoffman, 1950, Proc. Biol. Soc. Washington, 63: 70. Type species: *Cyclorhabdus contortus* Brolemann, 1900, by original designation.

One species, Guatemala.

Solaenorhabdus contortus (Brolemann)

Cyclorhabdus contortus Brolemann, 1900, Mém. Soc. Zool. France, 13: 98, figs. 21-25. ♂ HT (MHNP) from "Guatemala" without further locality.

Solaenorhabdus contortus: Hoffman, 1950, Proc. Biol. Soc. Washington, 63: 70.

CHELODESMID GENERA WITHOUT TRIBAL ASSIGMENT

Most of the chelodesmids described from the West Indies, and several from Central America, have not yet been placed in tribal groups. The Antillean genera, at least, appear to be fairly closely related and many of them, based by Loomis on variable peripheral characters, will surely be combined following a review of gonopod structure (already commenced by Attems, 1938, in the case of *Quisquicia)*. For the present, enumeration in alphabetical order offers the most practical management of these orphaned taxa.

Genus **Achromoporus** Loomis

Achromoporus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 112. Type species: *A. coloratus* Loomis, by original designation.

Five species, all endemic to Hispaniola..

Achromoporus coloratus Loomis

Achromoporus coloratus Loomis, 1936, Bull. Mus. Comp. Zool. 80: 113, fig. 50a-c. ♂ HT (USNM) from Thor, near Port-au-Prince, Haiti.

Range: Recorded from several localities in Haiti.

Achromoporus enneryensis Loomis

Achromoporus enneryensis Loomis, 1936, Bull. Mus. Comp. Zool. 80: 115, fig. 51. ♂ HT (USNM) from Ennery, Haiti.

Achromoporus furcipes Loomis

Achromoporus furcipes Loomis, 1936, Bull. Mus. Comp. Zool., 80: 117, fig. 52. ♂ HT (USNM) from site near Plaisance, Haiti.

Range: Recorded from Morne Pilboreau, Haiti.

Achromoporus heteromus Loomis

Achromoporus heteromus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 49, fig. 17a-b. ♂ HT (MCZ) from Sanchez, Republica Dominicana.

Achromoporus robustus Loomis

Achromoporus robustus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 118, fig. 53a-b. ♂ HT (USNM) from site near Cancoque, Haiti.

Range: Recorded also from near Plaisance, Haiti.

Genus **Amphelictogon** Chamberlin

Amphelictogon Chamberlin, 1918, Bull. Mus. Comp. Zool. 62: 224. Type species: *A. cubanus* Chamberlin, by original designation. – Hoffman, 1963, Ent. Mitt. Zool. Mus. Hamburg, 2: 399. – Pérez-Asso, 1996, Insecta Mundi, 10: 182 (revision).

17 species (one with four subspecies), Cuba, Bahama Islands.

Pérez-Asso (1996) recognized three species-groups in his careful revision of this genus, which should be consulted in the original for details. The following alphabetical listing is merely a concession to consistency of format and in no way implies disagreement with the proposed groups.

Amphelictogon alayoni Pérez-Asso

Amphelictogon alayoni Pérez-Asso, 1996, Insecta Mundi, 10: 196, figs. 25A-B, 27C-F, 28). ♂ HT (MHNCu) from Farallones de Moa near Holguín, Prov. Holguín, Cuba.

Amphelictogon couloni (Humbert & DeSaussure)

Polydesmus Couloni Humbert & DeSaussure, 1869, Rev. Mag. Zool., (2) 21: 151. ♂ HT (MHNG) from "île de Cuba" without further locality.

Leptodesmus Couloni: Carl, 1903, Rev. Suisse Zool., 11: 552, fig. 13 (gonopod of holotype).

Amphelictogon couloni: Chamberlin, 1918, Bull. Mus. Comp. Zool. 62: 232. – Pérez-Asso, 1996, Insecta Mundi, 10: 186, fig. 11.

Range: Reported from Pico Turquino, Prov. Santigo de Cuba, Cuba (Loomis, 1938).

Amphelictogon cubanus Chamberlin

Amphelictogon cubanus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 224. ♂ HT (MCZ) from Guantánamo, Oriente, Cuba. – Pérez-Asso, 1996, Insecta Mundi, 10: 182, figs. 2A-b, 3A-G, 11).

Amphelictogon rubripes: Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 225. ♂ HT (MCZ) from Belona, Prov. Guantánamo, Cuba. Synonymized by Pérez-Asso, 1996.

Amphelictogon zygethus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 227. ♀ HT (MCZ) from San Carlos, Prov. Guantánamo, Cuba. Synonymized by Pérez-Asso, 1996.

Amphelictogon guantanamanus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 228. ♂ HT (MCZ) from Guantánamo, Prov. Guantánamo, Cuba. Synonymized by Pérez-Asso, 1996.

Amphelictogon flavipes Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 229. ♂ HT (MCZ) from Monte Toro, above Hembrita, Prov.Guantánamo, Cuba. Synonymized by Pérez-Asso, 1996.

Range: Throughout easternmost Cuba (map, Pérez-Asso, 1996, fig. 11).

Amphelictogon dentatus Chamberlin

Amphelictogon dentatus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 226. ♀ HT (MCZ) from Alto de la Unión, Monte Líibano, Prov. Guantánamo, Cuba. – Pérez-Asso, 1996, Insecta Mundi, 10: 185, figs. 4A-B, 5A-D, 11 (redescription, localities).

Range: Guantánamo and Holguín provinces, Cuba.

Amphelictogon flexus Loomis

Amphelictogon flexus Loomis, 1938, Bull. Mus. Comp. Zool.., 82: 456, figs. 22a-b. ♂ HT (MCZ) from mountains north of Imias, Prov.Guantánamo, Cuba. – Pérez-Asso, 1996, Insecta Mundi, 10: 196, figs. 24A-B, 28.

Amphelictogon garridoi Pérez-Asso

Amphelictogon garridoi Pérez-Asso, 1996, Insecta Mundi, 10: 197, figs. 26A-B, 27G-J, 28. ♂ HT (MNHNCu) from Boca de Jauco, Maisí, Prov. Guantánamo, Cuba.

Amphelictogon heteromus Hoffman

Amphelictogon heteromus Hoffman, 1963, Ent. Mitt. Zool. Mus. Hamburg, 2: 400, figs. 1-6. ♂ HT (ZMH) from mountains near Guisa, Bayamo, Prov. Granma, Cuba. – Pérez-Asso, 1996, Insecta Mundi, 10: 188, figs. 5G, 8A-B, 11.

Amphelictogon hoffmani Pérez-Asso

Amphelictogon hoffmani Pérez-Asso, 1996, Insecta Mundi, 10: 192, figs. 18A-B, 22, 27A. ♂ HT (MNHNCu) from Agabama, Prov. Villa Clara, Cuba.

Range: Also recorded from Cubal de la Tres Ceibas, Prov. Matanzas, Cuba.

Amphelictogon magnus (Bollman)

Rhacophorus magnus Bollman, 1888, Proc. U. S. Nat. Mus., 11: 337. ♂ HT (USNM) labeled only "Cuba".

Caraibodesmus magnus: Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 236.

Amphelictogon atricolor Loomis, 1938, Bull. Mus. Comp. Zool., 82: 466, fig. 21. ♂ HT (MCZ) from Yunque de Baracoa, Prov. Guantánamo, Cuba. Synonymized by Pérez-Asso, 1996.

Amphelictogon magnus: Pérez-Asso, 1996, Insecta Mundi, 10: 195, figs. 23A-B, 27B, 28.

Range: Known only from the type locality of *atricolor.*

Amphelictogon obscurus Chamberlin

Amphelictogon obscurus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 226. ♂ HT (MCZ) from La Cabrera, Prov. Guantánamo, Cuba. – Loomis, 1938, Bull. Mus. Comp. Zool. 82: 464, fig. 19.

Amphelictogon pallidipes Chamberlin

Amphelictogon pallidipes Chamberlin, 1918, Bull. Mus. Comp. Zool. 62: 228. ♂ HT (MCZ) from Las Termopilas, Monte Libano, Guantánamo, Cuba.– Pérez-Asso, 1996, Insecta Mundi, 10: 193, figs. 20A-B, 21A-D, 22.

Amphelictogon propinquus Loomis

Amphelictogon propinquus Loomis, 1938, Bull. Mus. Comp. Zool., 82: 460, figs. 17a, b. ♂ HT (MCZ) from southwest slope Pico Turquino, Sierra Maestra, Prov. Santiago de Cuba, Cuba. – Pérez-Asso, 1996, Insecta Mundi, 10: 186, figs. 5F, 6A-B, 11.

Range: Several localities in the Sierra Maestra, Cuba.

Amphelictogon rex Loomis

Amphelictogon rex Loomis, 1941, Psyche, 48: 36, pl. 4, fig. A. ♂ HT (MCZ) from Cayo del Rey, south of Sierra de Nipe, Prov. Santiago de Cuba, Cuba. – Pérez-Asso, 1996, Insecta Mundi, 10: 187, figs. 5E, 7A-B, 11).

Amphelictogon strumosus Loomis

Amphelictogon strumosus Loomis, 1938, Bull. Mus. Comp. Zool. 82: 465, fig. 20. ♂ HT (MCZ) from Buenos Aires, Trinidad, Prov. Sancti-Spiritus, Cuba. – Pérez-Asso, 1996, Insecta Mundi, 10: 191, figs. 16A-B, 17C-D, 22.

Amphelictogon subterraneus subterraneus (DeSaussure)

Polydesmus subterraneus DeSaussure, 1859, Linnean Entom., 13: 323; 1860, Soc. Phys. Hist. Nat. Genève, 15: 302, figs. 6, 7. ♂ HT (MHNG) from Gruta de Cotilla, Prov. La Habana, Cuba.

Leptodesmus subterraneus: Carl, 1903, Rev. Suisse Zool., 11, pl. 16, fig. 14.

Amphelictogon subterraneus: Chamberlin, 1918, Bull. Mus. Comp. Zool. 62: 232.

Amphelictogon subterraneus subterraneus [by implication]: Pérez-Asso, 1996, Insecta Mundi, 10: 189, figs. 12A-B, 17A, 22.

Amphelictogon subterraneus bahamiensis Chamberlin

Amphelictogon bahamiensis Chamberlin, 1918, Bull. Mus. Comp. Zool. 62: 231. ♂ HT (MCZ) from Mangrove Cay, Andros Island.

Amphelictogon subterraneus bahamiensis: Pérez-Asso, 1996, Insecta Mundi, 10: 189. Figs. 13A-B, 14, 22.

Range: Several localities in the Archipiélago de Camagüey, Prov. Camagüey, Cuba. The ostensible type locality is suspect as the result of mislabeling or, less likely, an introduced population.

Amphelictogon subterraneus dolius Chamberlin

Amphelictogon dolius Chamberlin, 1922, Proc. U. S. Nat. Mus. 61(10): 14. ♀ HT (MCZ) from Punta de Judas, 40 miles east of Caibarien, Prov. Sancti Spiritus, Cuba. – Hoffman, 1959, Journ. Washington Acad. Sci., 49: 287, figs. 5-9.

Amphelictogon subterraneus dolius: Pérez-Asso, 1996, Insecta Mundi, 10: 190, figs. 15A-B, 17B, 22).

Range: Two localities in northeastern Sancti Spiritus, Cuba.

Amphelictogon subterraneus pinetorum Chamberlin

Amphelictogon pinetorum Chamberlin, 1922, Proc. U. S. Nat. Mus., 61(10): 15, pl. 5, fig. 6. ♂ HT (MCZ) from Bibijagua, Isla de Juventud, Cuba.

Amphelictogon subterraneus pinetorum: Pérez-Asso, 1996, Insecta Mundi, 10: 191, fig. 22.

Amphelictogon thomasi Pérez-Asso

Amphelictogon thomasi Pérez-Asso, 1996, Insecta Mundi, 10: 188, figs. 9A-B, 10A-D, 11. ♂ HT (MNHNCu) from Chivirico, Prov. Santiago de Cuba, Cuba.

Range: Sierra de Maestra, Cuba.

NAMES OF UNCERTAIN STATUS PROPOSED IN AMPHELICTOGON

Amphelictogon juvenis Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 230. Immature HT (MCZ) from Belona Oriente, Guantánamo, Cuba.

Amphelictogon maculatus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 230. Immature HT (MCZ) from Los Hondones, ?Prov., Cuba.

Genus **Antillodesmus** Chamberlin

Antillodesmus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 236. Type species: *A. grenadanus* Chamberlin, by original designation.

One species, Lesser Antilles.

Antillodesmus vincenti (Pocock)

Odontopeltis vincenti Pocock, 1894, Journ. Linnaean Soc. London, 24: 514, figs. 4-4d. ♂ HT (BMNH) from St. Vincent, without further locality.

Antillodesmus vincenti: Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 237. – Loomis, 1934, Smithsonian Misc. Coll., 89 (14): 30, fig. 15.

Antillodesmus grenadanus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 236. ♂ HT (MCZ) from Grand Etang, Grenada. Synonymized by Loomis, 1934.

Range: Recorded from Grenada and St. Vincent, Lesser Antilles.

Genus **Antrogonodesmus** Hoffman

Antrogonodesmus Hoffman, 1959, Journ. Washington Acad. Sci., 49: 284. Type species: *A. curiosus* Hoffman, by original designation.

One species, Cuba.

Antrogonodesmus curiosus Hoffman

Antrogonodesmus curiosus Hoffman, 1959, Journ. Washington Acad. Sci., 49: 285, figs. 1-4. ♂ HT (USNM) from San Vincente, Prov. Pinar del Rio, Cuba.

Genus **Beatadesmus** Loomis

Beatadesmus Loomis, 1934, Smithsonian Misc. Coll. 89(14): 31. Type species: *B. utowani* Loomis, by original designation.

One species, Haiti.

Beatadesmus utowani Loomis

Beatadesmus utowani Loomis, 1934, Smithsonian Misc. Coll. 89(14): 32, figs. 16a-c. ♂ HT (USNM) from Beata Island, Haiti.

Genus **Biaporus** Loomis

Biaporus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 61. Type species: *B. montanus* Loomis, by original designation.

One species, Republica Dominicana.

Biaporus montanus Loomis

Biaporus montanus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 62, fig. 23. ♂ HT (MCZ) from Pico del Yaque, 8000-10,000 ft., Loma Rucilla, in the Cordillera Central, Republica Dominicana.

Genus **Chondrotropis** Loomis

Chondrotropis Loomis, 1936, Bull. Mus. Comp. Zool., 80: 120. Type species: *C. niger* Loomis, by original designation.

Three species, Republica Dominicana.

Chondrotropis niger Loomis

Chondrotropis niger Loomis, 1936, Bull. Mus. Comp. Zool., 80: 121, fig. 54. ♂ HT (USNM) from "near the road below Ennery", Haiti.

Chondrotropis pictus Loomis

Chondrotropis pictus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 123, fig. 55, pl. 2, fig. 2. ♂ HT (USNM) from Morne Pilboreau, above Ennery, Haiti.

Chondrotropis venustus Loomis

Chondrotropis venustus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 126, fig. 56, pl. 2, fig. 3. ♂ HT (USNM) from Morne Brigand, near Bayeux, Haiti.

Genus **Craterodesmus** Loomis

Craterodesmus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 60. Type species: *C. ovatus* Loomis, by original designation.

One species, Republica Dominicana.

Craterodesmus ovatus Loomis

Craterodesmus ovatus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 60, fig. 22. ♂ HT (MCZ) from Monte Diego de Campo, 3000-4000 ft., Republica Dominicana.

Genus **Cubodesmus** Chamberlin

Cubodesmus Chamberlin, 1918, Bull. Mus. Comp. Zool. 62: 237. Type species: *C. ramsdeni* Chamberlin, by original designation. – Pérez-Asso, 1998, Myriapodologica, 5: 41-54 (revision).

Four species, Cuba.

Cubodesmus mariana Pérez-Asso

Cubodesmus mariana Pérez-Asso, 1998, Myriapodologica, 5: 48, figs. 7, 8, 13, 17, 19. ♂ HT (MNHNCu) from Limoncito, Sierra de Mariana, Guantanamo, Cuba.

Cubodesmus prominens Loomis

Cubodesmus prominens Loomis, 1938, Bull. Mus. Comp. Zool., 82: 471, figs. 24a-b. ♂ HT (MCZ) from Los Llanos, , Cuba. – Pérez-Asso, 1998, Myriapodologica, 5: 46, figs. 1, 2, 5, 6, 12, 15, 19.

Range: Guantánamo and Holguín provinces, Cuba.

Cubodesmus ramsdeni Chamberlin

Cubodesmus ramsdeni Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 238. ♂ HT (MCZ) from San Carlos, Rio Seco, Guantánamo, Cuba. – Pérez-Asso, 1998, Myriapodologica, 5: 43, figs. 3, 4, 11, 16, 19.

Cubodesmus latior Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 239. ♂0 HT (MCZ) from Monte Toro, La Hembrita, Guantánamo, Cuba. Synonymized by Pérez-Asso, 1998.

Cubodesmus proximus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 239. ♂ HT (MCZ) from Ramon el Moro, Guantánamo, Cuba. Synonymized by Pérez-Asso, 1998.

Cubodesmus princeps Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 240. ♂ HT (MCZ) from Belona, Oriente, Cuba. ♀ HT (MCZ) from La Union, Monte Libano, Guantánamo, Cuba. Synonymized by Pérez-Asso, 1998.

Cubodesmus limoneus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 24. ♂ HT (MCZ) from Monte Toro, above La Hembrita, Guantánamo, Cuba. Synonymized by Pérez-Asso, 1998.

Range: Meseta del Guaso and Sierra de Canasta, Prov. Guantánamo, Cuba (map, Pérez-Asso, 1998, fig. 19).

Cubodesmus yazminae Pérez-Asso

Cubodesmus yazminae Pérez-Asso, 1998, Myriapodologica, 5: 49, figs. 9, 10, 14, 18, 19. ♂ HT (MNHNCu) from Paredones de Sierra de Cubitas, Prov. Camagüey, Cuba.

Genus **Cylindromus** Loomis

Cylindromus Loomis, 1977, Florida Entom., 60: 21. Type species: *C. uniporus* Loomis, by original designation.

One species, Puerto Rico.

Cylindromus uniporus Loomis, 1977, Florida Entom., 60: 22, figs. 1-3. ♀ HT (FSCA) from Cuevo los Choros, 15 km south of Arecibo, Puerto Rico.

Genus **Cyrtaphe** Loomis

Cyrtaphe Loomis, 1936, Bull. Mus. Comp. Zool. 80: 142. Type species, *C. alternata* Loomis, by original designation.

Four species, Hispaniola.

Cyrtaphe alternata Loomis

Cyrtaphe alternata Loomis, 1936, Bull. Mus. Comp. Zool., 80: 143, fig. 63, pl. 1, fig. 5, pl. 2, fig. 1. ♂ HT (USNM) from Morne Pilboreau, above Ennery, Haiti.

Cyrtaphe continuata Loomis

Cyrtaphe continuata Loomis, 1936, Bull. Mus. Comp. Zool., 80: 147, fig. 65. ♂ HT (USNM) from vicinity of Trouin, Haiti.

Cyrtaphe domingensis Loomis

Cyrtaphe domingensis Loomis, 1941, Bull. Mus. Comp. Zool. 88: 55, fig. 20. ♂ HT (MCZ) from Monte Diego de Ocampo, Cordillera Setentrional, Republica Dominicana.

Cyrtaphe lobipes Loomis

Cyrtaphe lobipes Loomis, 1936, Bull. Mus. Comp. Zool., 80: 145, fig. 64. ♂ HT (USNM) from "spring near Ennery", Haiti.

Genus **Ellipodesmus** Chamberlin

Ellipodesmus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 243. Type species: *E. simplex* Chamberlin, by original designation.

One species, Haiti.

Ellipodesmus simplex Chamberlin

Ellipodesmus simplex Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 243. ♀ HT (MCZ) from Jacmel, Haiti.

Genus **Eutyporhachis** Pocock

Eutyporhachis Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 168. Type species, *E. tesselatus* Pocock, by original designation.

Atylophor Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 49. Type species: *A. rafaelanus* Chamberlin, by original designation.

Two species, Guatemala, Chiapas.

Eutyporhachis rafaelanus (Chamberlin)

Atylophor rafaelanus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 50, pl. 18, figs. 8-11, pl. 19, figs. 1-3. ♂ HT (USNM) from San Rafael, Dept. ?, Guatemala.

Eutyporhachis tesselatus Pocock

Eutyporhachis tesselatus Pocock, 1909, Biol. Centr.-Amer., Diplop., p. 169, pl.. XIII, figs. 4-4c. Type specimens (location unknown) from Senahú, Dept. Alta Vera Paz, Guatemala.

Genus **Granmadesmus** Pérez-Asso

Granmadesmus Pérez-Asso, 1996, Revista Biologia, 4: 65. Type species: *G. minor* Pérez-Asso, by original designation.

One species, Cuba.

Granmadesmus minor Pérez-Asso, 1996, Revista Biologia, 4: 65, figs. 1-3. ♂ HT (MNHNCu) from Cueva Fustete, Niquero, Prov. Granma, Cuba.

Genus **Hypselodesmus** Loomis

Hypselodesmus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 53. Type species: *H. bicolor* Loomis, by original designation.

One species: Hispaniola.

Hypselodesmus bicolor Loomis

Hypselodesmus bicolor Loomis, 1941, Bull. Mus. Comp. Zool. 88: 54, figs. 19a-c. ♂ HT (MCZ) from Monte Quita Espuela, Republica Dominicana.

Genus **Lasiomazus** Loomis

Lasiomazus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 51. Type species: *L. concolor* Loomis, by original designation.

One species, Hispaniola.

Lasiomazus concolor Loomis

Lasiomazus concolor Loomis, 1941, Bull. Mus. Comp. Zool., 88: 52, fig. 18. ♂ HT (MCZ) from Loma Vieja near Constanza, Cordillera Central, Republica Dominicana.

Genus **Leiomodesmus** Loomis

Leiomodesmus Loomis, 1938, Bull. Mus. Comp. Zool., 82: 458. Type species: *L. Flavocinctus* Loomis, by original designation.

One species, Cuba.

Leiomodesmus flavocinctus Loomis

Leiomodesmus flavocinctus Loomis, 1938, Bull. Mus. Comp. Zool., 82: 458, figs. 16a-c. F HT (MCZ) from El Yunque de Baracoa, Prov. Guantánamo, Cuba.

Genus **Plicatodesmus** Pérez-Asso

Plicatodesmus Pérez-Asso, 1995, Insecta Mundi, 9: 171. Type species: *P. turquino* Pérez-Asso, by original designation.

Three species, Cuba.

Plicatodesmus baire Pérez-Asso

Plicatodesmis baire Pérez-Asso, 1995, Insecta Mundi, 9: 172, figs. 1B, 3B, 4. ♂ HT (MNHNCu) from La Pimenta, two km south of La Tabla, Baire, Prov. Santiago de Cuba, Cuba..

Plicatodesmus mariana Pérez-Asso

Plicatodesmus mariana Pérez-Asso, 1995, Insecta Mundi, 9: 173, figs. 2A. 3A, 4. ♂ HT (MNHNCu) from Limoncito, Sierra de Mariana, Prov. Guantánamo, Cuba.

Plicatodesmus turquino Pérez-Asso

Plicatodesmus turquino Pérez-Asso, 1995, Insecta Mundi, 9: 171, figs. 1A, 3C, 4. ♂ HT (MNHNCu) from Pico Turquino, Sierra Maestra, Prov. Santiago de Cuba, Cuba.

Genus **Podiscodesmus** Loomis

Podiscodesmus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 56. Type species: *P. carinatus* Loomis, by original designation.

One species, Hispaniola.

Podiscodesmus carinatus Loomis

Podiscodesmus carinatus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 58, fig. 21. ♂ HT (MCZ) from Sanchez, Republica Dominicana.

Genus **Pterygiodesmus** Loomis

Pterygiodesmus Loomis, 1936, Bull. Mus. Comp. Zool. 80: 149. Type species: *P. strumosus* Loomis, by original designation.

One species, Hispaniola.

Pterygiodesmus strumosus Loomis

Pterygiodesmus strumosus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 150, figs. 66a-c. ♀ HT (MCZ) from La Vestite. 6000-7000 ft., in the La Selle Range, Haiti.

Genus **Quisquicia** Loomis

Quisquicia Loomis, 1936, Bull. Mus. Comp. Zool., 80: 128. Type species: *Q. scitula* Loomis, by original designation.

Pogonodesmus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 137. Type species: *P. pullus* Loomis, by original designation. Synonymized by Attems, 1938.

Aplopododesmus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 139. Type species: *A. longipes* Loomis, by original designation. Synonymized by Attems, 1938.

Aplopodesmus [*sic*!] Hoffman, 1980, Classification of the Diplopoda, p. 153.

Seven species, Hispaniola.

Synonymy of this name with *Beatadesmus* Loomis, 1934, seems likely.

Quisquicia engonata Loomis

Quisquicia engonata Loomis, 1936, Bull. Mus. Comp. Zool., 80: 132, fig. 58a-b. ♂ HT (MCZ) from Roche Croix, Morne La Hotte, Haiti.

Quisquicia insignis (Chamberlin)

Caraibodesmus insignis Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 234. ♀ HT (MCZ) from Furcy, Haiti.

Quisquicia insignis Loomis, 1936, Bull. Mus. Comp. Zool., 80: 133, fig. 59.

Range: Recorded from Furcy and Kenscoff, Haiti.

Quisquicia longipes (Loomis)

Aplopododesmus longipes Loomis, 1936, Bull. Mus. Comp. Zool., 80: 140, figs. 62a-b. ♂ HT (MCZ) from Morne La Selle, Haiti.

Quisquicia longipes: Attems, 1938, Das Tierreich, 69: 126.

Quisquicia pulla (Loomis)

Pogonodesmus pullus Loomis, 1936, Bull. Mus. Comp. Zool. 80: 138, fig. 61. ♂ HT (MCZ) from Kenscoff, 3000-6000 ft., Haiti.

Quisquicia pullus: Attems, 1938, Das Tierreich, 69: 126.

Quisquicia rubens Loomis

Quisquicia rubens Loomis, 1936, Bull. Mus. Comp. Zool. 80: 135, fig. 60. ♀ HT (MCZ) from Morne La Selle, 7500 ft., Haiti.

Quisquicia sallei (DeSaussure)

Polydesmus (Leptodesmus) Sallei DeSaussure, 1860, Mém. Soc. Phys. Hist. Nat. Genève, 15: 300, figs. 8, 8a-c. ♀ HT (MHNG) from ". . .l'île de Saint-Domingue" without further locality.

Odontopeltis sallei: Pocock, 1894, Journ. Linnaean Soc. London, 24: 512.

Caraibodesmus (?) sallei: Chamberlin, 1918, Bull. Mus. Comp. Zool. 62: 236.

Quisquicia sallei: Loomis, 1936, Bull. Mus. Comp. Zool., 80: 137.

Insofar as can be ascertained from the original description, Loomis was very likely correct in referring this species to *Quisquicia*. The same confidence may not be extended to Brolemann's (1898: 284) redescription of a male in MHNP considered to be ". . .l'original", for which no collection data were supplied.

Quisquicia scitula Loomis

Quisquicia scitula Loomis, 1936, Bull. Mus. Comp. Zool., 80: 130, fig. 57a-b, pl. 1, fig. 4. ♂ HT (MCZ) from north of Trouin, Haiti.

Genus **Ricodesmus** Chamberlin

Ricodesmus Chamberlin, 1922, Proc. U. S. Nat. Mus. 61(10): 15. Type species: *R. stejnegeri* Chamberlin, by original designation.

Two (or only one?) species, Puerto Rico.

Ricodesmus mauritii (Brandt), new combination

Polydesmus mauritii Brandt, 1839, Bull. Sci. Acad. Imp. St. Petersbourg, 5: 311. ♀ HT (ZMB) labeled only "Porto Rico."

Odontopeltis mauritii: Pocock, 1894, Journ. Linnean Soc. London, 24: 513.

Caraibodesmus (?) mauritii: Chamberlin, Bull. Mus. Comp. Zool. 62: 236.

Ricodesmus stejnegeri Chamberlin

Ricodesmus stejnegeri Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(11): 15, pl.5, fig. 7, pl. 6, figs. 1, 2. ♂ HT (USNM) from El Yunque, Puerto Rico.

Range: Central highlands of Puerto Rico.

Genus **Schistides** Chamberlin

Schistides Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 51. Type species: *S. atopophallus* Chamberlin, by original designation.

One species, Honduras.

Schistides atopophallus Chamberlin

Schistides atopophallus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 51, pl. 19, figs. 4-9. ♂ HT (USNM) from San Juan Pueblo, Honduras.

Genus **Synecheporus** Loomis

Synecheporus Loomis, 1941, Bull. Mus. Comp. Zool. 88: 63. Type species: *S. platyurus* Loomis, by original designation.

One species, Hispaniola.

Synecheporus platyurus Loomis

Synecheporus platyurus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 64, fig. 24. ♂ HT (MCZ) from Pico de Yaque, 8000-10000 ft., Loma Rucilla, Republica Dominicana.

Genus **Tomodesmus** Chamberlin

Tomodesmus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 243. Type species: *T. thaumastus* Chamberlin, by original designation.

One species, Cuba.

Tomodesmus thaumastus Chamberlin

Tomodesmus thaumastus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 244. F HT (MCZ) from Monte Libano, Las Termapilas, Guantánamo, Cuba.

CHELODESMID SPECIES OF UNCERTAIN GENERIC POSITION

Amphelictogon manni Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: ♀ HT (MCZ) from Diquini, Haiti.

Doubtless referable to one of the local Haitian genera.

Family Eurymerodesmidae Causey

Eurymerodesmidae Causey, 1951, Proc. Arkansas Acad. Sci., 4: 69. – Shelley, 1989, Mem. American Entom. Soc., 37: 18 (revision of family).

One genus, central and southeastern United States.

Genus **Eurymerodesmus** Brolemann

Eurymerodesmus Brolemann, 1900, Mem. Soc. Zool. France, 13: 101. Type species: *Polydesmus hispidipes* Wood, 1864, by monotypy. – Shelley, 1989, Mem. American Entom. Soc., 37: 19 et seq.

Kewanius Chamberlin, 1938, Proc. Biol. Soc. Washington, 51: 208. Type species: *Eurymerodesmus simplex* Chamberlin, 1920, by original designation. Synonymized by Causey, 1963.

Paresmus Chamberlin, 1942, Bull. Univ. Utah, 32(8): 7. Type species: *Paresmus paroicus* Chamberlin, by original designation. Synonymized by Shelley, 1989.

Twenty-five species, central and southeastern United States (map, Shelley, 1989, fig. 1), greatest diversity in Louisiana, Arkansas, and eastern Texas..

Shelley (op. cit.) organized the species of this genus into four clearly-defined groups (called by him lineages). Although I believe that these are defensible, phylogenetically natural, groups, I here list all species in simple alphabetical order for convenience of reference and to maintain consistency with the arrangement in other genera.

Eurymerodesmus amplus Causey

Eurymerodesmus amplus Causey, 1952, Chicago Acad. Sci. Nat. Hist. Misc., 106: 4, fig. 3. ♂ HT (USNM) from Ruston, Lincoln Parish, Louisiana. – Shelley, 1989, Mem. American Entom. Soc., 37: 49, figs. 54, 72-82, 211-212.

Eurymerodesmus hamatilis Loomis, 1969, Florida Entom., 52: 250, figs. 11-13. ♂ HT (USNM) from Jackson Hill Marina, Sam Rayburn Reservation, about eight miles North of Zavala, Angelina Co., Texas.

Range: Louisiana west of the Mississippi River, eastern Texas; also a disjunct population in Mason Co., Texas (maps, Shelley, 1989, figs. 54, 211-212).

Eurymerodesmus angularis Causey

Eurymerodesmus angularis Causey, 1951, Proc. Arkansas Acad. Sci., 4: 69, figs. 1-3. ♂ HT (ANSP) from DeVall's Bluff, Prairie Co., Arkansas. – Shelley, 1989, Mem. American Entom. Soc. 37: 31, figs. 9, 17-30, 211.

Eurymerodesmus wellesleybentoni Causey, 1952, Ent. News, 63: 171, fig. 5. ♂ HT (ANSP) from Helena, Phillips Co., Arkansas. Synonymized by Shelley, 1989.

Eurymerodesmus wellesleybentonus [sic!]: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 81.

Range: Northern Louisiana, eastern Arkansas; possibly disjunct populations in western Missouri and northcentral Mississippi (map, Shelley, 1989, fig. 9).

Eurymerodesmus birdi birdi Chamberlin

Eurymerodesmus birdi Chamberlin, 1931, Ent. News, 42: 101, figs. 6-8. ♂ HT (USNM) from an unspecified locality in Murray Co., Oklahoma.

Eurymerodesmus creolus Chamberlin, 1942, Bull. Univ. Utah, 32(8): 6, fig. 16. ♂ HT (USNM) from five miles northwest of Shreveport, Caddo Par., Louisiana. Synonymized by Shelley, 1989.

Eurymerodesmus schmidti Chamberlin, 1943, Proc. Biol. Soc. Washington, 56: 38, fig. 7. ♂ HT (FMNH) from Rich Mountain at Mena, Polk Co., Arkansas. Synonymized by Shelley, 1989.

Eurymerodesmus plishneri Causey, 1950, Ohio Journ. Sci., 50: 271, fig. 8. ♂ HT (ANSP) from Mount Kessler in Fayetteville, Washington Co., Arkansas. Synonymized with *schmidti* by Causey, 1952; with *birdi* by Shelley, 1989.

Eurymerodesmus birdi birdi: Shelley, 1989, Mem. American Entom. Soc., 37: 74, figs. 147-160, 211-212.

Range: Northeastern Kansas and adjacent Missouri south to Louisiana, extreme western Mississippi, and coastal Texas (map, Shelley, 1989, fig. 147).

Eurymerodesmus birdi planus Causey

Eurymerodesmus planus Causey, 1950, Ent. News, 61: 196, fig. 5. ♂ HT (ANSP) from Piney Woods, Rankin Co., Mississippi.

Eurymerodesmus birdi planus Shelley, 1989, Mem. American Entom. Soc., 37: 77, figs. 147, 161-167, 211.

Range: Southwestern Mississippi, extreme eastern Louisiana (map, Shelley, 1989, fig. 147).

Eurymerodesmus caesariatus Shelley

Eurymerodesmus caesariatus Shelley, 1989, Mem. American Entom. Soc., 37: 64, figs. 54, 116-121. ♂ HT (FSCA) from seven miles north of Meadville, Franklkin Co., Mississippi.

Eurymerodesmus clavatus Shelley

Eurymerodesmus clavatus Shelley, 1989, Mem. American Entom. Soc., 37: 94, figs. 176, 204-209, 212. ♂ HT (FSCA) from New Ulm, Austin Co., Texas.

Eurymerodesmus compressus Causey

Eurymerodesmus compressus Causey, 1952, Ent. News, 63, 169, figs. 1-4. ♂ HT (not at ANSP, presumed lost), from Junction City, Union Co., Arkansas. – Shelley, 1989, Mem. American Entom. Soc., 37: 35, figs. 9, 31-37, 211.

Range: Union Co., Arkansas.

Shelley (1989: 35) designated a male neotype (FSCA) from six miles west of El Dorado, Union Co., Arkansas.

Eurymerodesmus crassatus Shelley

Eurymerodesmus crassatus Shelley, 1989, Mem. American Ent. Soc., 37: 66, figs. 54, 126-132, 211. ♂ HT (FSCA) from "off old US highway 165, 2.6 mi. S. Georgetown", Grant Par., Louisiana.

Eurymerodesmus dactylophorus Shelley

Eurymerodesmus dactylophorus Shelley, 1989, Mem. American Entom. Soc., 37: 87, figs. 177, 183-189, 212. ♂ HT (FSCA) from Maxwell, Caldwell Co., Texas.

Range: Southcentral Texas between the Brazos and Guadeloupe rivers (map, Shelley, 1989, fig. 212).

Eurymerodesmus digitatus Loomis

Eurymerodesmus digitatus Loomis, 1976, Florida Entom., 59: 288, figs. 1-3. ♂ HT (FSCA) from five miles ESE of Marble Falls, Burnet Co., Texas.– Shelley, 1989, Mem. American Ent. Soc., 37: 91, figs. 176, 197-203.

Range: Southwestern Oklahoma to central Texas (map, Shelley, 1989, fig. 176).

Eurymerodesmus dubius Chamberlin

Eurymerodesmus dubius Chamberlin, 1943, Proc. Biol. Soc. Washington, 56: 38, fig. 8. ♂ HT (FMNH) from Delight, Poke Co., Arkansas.– Shelley, 1989, Mem. American Entom. Soc., 37: 38, figs. 9, 45-53, 211.

Range: Southwestern Arkansas, and a disjunct record for Louisiana (map, Shelley, 1989, fig. 9).

Eurymerodesmus elevatus Shelley

Eurymerodesmus elevatus Shelley, 1989, Mem. American Entom. Soc., 37: 59, figs. 54, 96-101. ♂ HT (FSCA) from Jefferson City, Cole Co., Missouri.

Range: Central Missouri (map, Shelley, 1989, fig. 54).

Eurymerodesmus goodi Causey

Eurymerodesmus goodi Causey, 1952, Chicago Acad. Sci. Nat. Hist. Misc. 106: 3, fig. 1. ♂ HT (AMNH) from Bard Springs Road, 16 miles SE Mena, Polk Co., Arkansas. – Shelley, 1989, Mem. American Entom. Soc., 37: 36, figs. 9, 38-44, 211.

Range: A small area in Polk and Montgomery counties, Arkansas (Map, Shelley 1989, fig. 211).

Eurymerodesmus hispidipes (Wood)

Polydesmus (Polydesmus) hispidipes Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 7. 2 ♂ ST (USNM) from an unspecified site in Illinois.

Polydesmus (Paradesmus) hispidipes: Wood, 1865, Trans. American Philos. Soc., 13: 220, fig. 48.

Eurymerodesmus hispidipes: Brolemann, 1900, Mem. Soc. Zool. France, 13: 101. – Shelley, 1989, Mem. American Entom. Soc., 37: 25, figs. 2-9, 211.

Range: Known definitely only from a male taken at Charleston, Coles Co., Illinois, the record for Dixon Springs in that state (Causey, 1950) having been based on a specimen of *E. oliphantus*. A record for southeastern Arkansas (Ashley Co.) requires confirmation, if the locality is correct it perhaps represents an instance of downstream dispersal by high water (map, Shelley, 1989, fig. 9).

Eurymerodesmus impurus (Wood)

Polydesmus impurus Wood, 1867, Proc. Acad. Nat. Sci. Philadelphia, 19: 43. 2 ♂ ST (ANSP) from Long Point, Washington Co., Texas.

Paresmus impurus: Causey, 1952, Ent. News, 63: 174, figs. 8, 9.

Eurymerodesmus impurus: Shelley, 1989, Mem. American Entom. Soc., 37: 29, figs. 9-16, 212.

Range: Brazos and Washington counties, eastern Texas (map, Shelley, 1989, fig. 9).

Eurymerodesmus melacis Chamberlin & Mulaik

Eurymerodesmus melacis Chamberlin & Mulaik, 1941, Journ. New York Entom. Soc., 49: 59. ♂ HT (USNM) from Edinburg, Hidalgo Co., Texas. – Shelley, 1989, Mem. American Entom. Soc., 37: 882, figs. 176-182, 212.

Range: Coastal Plain and Edwards Plateau regions of central and southern Texas (map, Shelley, 1989, fig. 176).

Eurymerodesmus mundus Chamberlin

Eurymerodesmus mundus Chamberlin, 1931, Ent. News, 32: 102, figs. 3-5. ♂ HT (USNM) from University (Norman), Cleveland Co., Oklahoma. – Shelley, 1989, Mem. American Ent. Soc., 37: 78, figs. 147, 168-175, 211-212.

Range: Great Plains, from Nebraska to norteastern Texas (map, Shelley, 1989, fig. 147).

Eurymerodesmus newtonus Chamberlin

Eurymerodesmus newtonus Chamberlin, 1942, Bull. Univ. Utah, 32(8): 5, fig. 14. ♂ HT (USNM) from 1.2 miles south of Jasper, Newton Co., Arkansas. – Shelley, 1989, Mem. American Entom. Soc., 37: 53, figs. 54, 83-88, 211.

Eurymerodesmus bentonus Causey, 1950, Ohio Journ Sci., 50: 268, fig. 5. ♂ HT (ANSP) from Monte Ne, Benton Co., Arkansas. Synonymized by Shelley, 1989.

Range: Benton, Newton, and Washington counties, Arkansas (map, Shelley, 1989, fig. 54).

Eurymerodesmus oliphantus Chamberlin

Eurymerodesmus oliphantus Chamberlin, 1942, Bull. Univ. Utah, 32(8): 6, fig. 15. ♂ HT (USNM) from 15 miles SW of Oliphant, Jackson Co., Arkansas. – Shelley,. 1989, Mem. American Entom. Soc., 37: 55, figs. 54, 89-95, 211.

Range: Arkansas, Missouri, and southern Illinois (map, Shelley, 1989, fig. 54).

Eurymerodesmus pariocus (Chamberlin)

Paresmus pariocus Chamberlin, 1942, Bull. Univ. Utah, 32(8): 7, figs. 18, 19. Original type material, from 1.5 miles north of Clay, on the Lincoln-Jackson parish border, Louisiana, is lost; Shelley (1989: 65) designated a ♂ neotype (FSCA) from a nearby locality, Ruston, Pincoln Par., Louisiana.

Eurymerodesmus pariocus: Shelley, 1989, Mem. American Entom. Soc., 37: 65, figs. 54, 122-125, 211.

Range: Lincoln Parish, Louisiana, only.

Eurymerodesmus polkensis (Causey)

Paresmus polkensis Causey, 1952, Chicago Acad. Sci. Nat. Hist. Misc., 106: 5, fig. 4. ♂ HT (AMNH) from 11 miles north of Mena, Polk Co., Arkansas.

Eurymerodesmus polkensis: Shelley, 1989, Mem. American Entom. Soc., 37: 62, figs. 54, 108-115, 211.

Range: Montgomery, Polk, and Scott counties, western Arkansas (map, Shelley 1989, fig. 54).

Eurymerodesmus pulaski (Causey)

Paresmus pulaski Causey, 1950, Ohio Journ. Sci., 50: 271, fig. 9. Original type material, from three miles south of Sweet Home, Pulaski Co., Arkansas, is lost; Shelley (1989: 68) designated a topotypic ♂ neotype (USNM) from Little Rock, Pulaski Co., Arkansas.

Eurymerodesmus pulaski: Shelley, 1989, Mem. American Entom. Soc., 37:68, figs. 54, 133-140, 211.

Eurymerodesmus sanbernardiensis Causey

Eurymerodesmus sanbernardiensis Causey, 1952, Ent. News, 63: 174, figs. 6, 7. ♀ HT (ANSP) from beside the San Bernardo River at US 59 bridge, Fort Bend Co., Texas. – Shelley, 1989, Mem. American Entom. Soc., 37: 90, figs. 176, 190-195, 212.

Range: Southeastern Texas, between the Brazos and Colorado rivers (map, Shelley, 1989, fig. 176).

Eurymerodesmus serratus Shelley

Eurymerodesmus serratus Shelley, 1989, Mem. American Entom. Soc., 37: 69, figs. 54, 141-146, 211. ♂ HT (FSCA) from Cato, Pulaski Co., Arkansas.

Range: Pulaski Co., Arkansas. Shelley (op. Cit. 71) discusses an additional sample labeled as having been taken in Alachua Co., Florida. Until confirmed by additional collections, this locality must be held in suspicion.

Eurymerodesmus simplex Chamberlin

Eurymerodesmus simplex Chamberlin, 1920, Proc. Biol. Soc. Washington, 33: 98. ♂ HT (MCZ) from an uncertain locality in Louisiana. – Shelley, 1989, Mem. American Entom. Soc., 37: 60, figs. 54, 102-107, 211.

Kewanius simplex: Chamberlin, 1938, Proc. Biol. Soc. Washington, 51: 208.

Range: Rapides and Evangeline parished, central Louisiana (map, Shelley 1989, fig. 211).

Contrary to Shelley (1989: 62), I believe that Chamberlin's citation of *simplex* as the type species of *Kewanius* constitutes a new combination even though the two words are not directly juxtaposed.

Eurymerodesmus varius varius (McNeill)

Polydesmus varius McNeill, 1887, Proc. U. S. Nat. Mus., 10: 323. ♀ HT (USNM) from Penscaola, Escambia Co., Florida.

Eurymerodesmus varius: Causey, 1954, Tulane Stud. Zool. 2: 67.

Eurymerodesmus minimus Loomis, 1943, Journ. Washington Acad. Sci., 33: 320, fig. 2. ♂ HT (MCZ) from Marianna, Jackson Co., Florida. Synonymized by Causey, 1954.

Eurymerodesmus various varius: Shelley, 1989, Mem. American Entom. Soc., 37: 43, figs. 54-61.

Range: Southeastern United States, from vicinity of Mobile Bay to southeastern North Carolina, Florida peninsula south to Hernando County (map, Shelley, 1989, fig. 54).

Eurymerodesmus varius christianus Chamberlin

Eurymerodesmus christianus Chamberlin, 1946, Proc. Biol. Soc. Washington, 59: 140, fig. 5. ♂ HT (USNM) from Pass Christian, Harrison Co., Mississippi.

Eurymerodesmus varius christianus: Shelley, 1989, Mem. American Entom. Soc., 37: 46, figs. 54, 64-65, 211.

Range: Southeastern Louisiana between the Pearl and Mississippii Rivers (map, Shelley, 1989, fig. 211).; populations intergradient with *E. v. varius* are recorded throughout Mississippi.

Eurymerodesmus varius louisianae Chamberlin

Eurymerodesmus louisianae Chamberlin, 1942, Bull. Univ. Utah, 32(8): 6, fig. 17. ♂ HT (USNM) from two miles south of Saline, Natchitoches Par., Louisiana.

Eurymerodesmus spectabilis Causey, 1950, Ohio Journ. Sci., 50: 270, figs. 6, 7. ♂ HT (ANSP) from three miles east of Magnolia, Columbia Co., Arkansas. Synonymized with *louisianae* by Causey (1963).

Eurymerodesmus varius louisianae: Shelley, 1989, Mem. American Entom. Soc., 37: 47, figs. 54, 66-71, 211.

Range: Central Louisiana north to southwestern Arkansas (map, Shelley, 1989, fig. 54).

Family Euryuridae Pocock

Euryurinae (in part) Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 147 (*Euryurus* only).

Euryurini (in part) Brolemann, 1916, Ann. Soc. Ent. France, 84: 584 (*Euryurus* only).

Euryuridae Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 249.

Euryurini Hoffman, 1980, Classification of the Diplopoda, p. 164.

Euryuridae Hoffman, 1998, Myriapodologica, 5: 136.

Until recently, this small North American taxon has been affiliated with the pantropical group Platyhacidae as a subcategory or as part of a heterogeneous coordinate family. Removal from such placements and re-location near of the more generalized xystodesmids was suggested by Hoffman (1998).

The genus *Illiniurus* is again considered as valid, after a period during which I thought it referable to *Auturus*. Revision of that genus by Shelley (1982) indicated that its homogeneity would be violated by the inclusion of *Illiniurus beattyi*. As that species remains known only from its original collection in 1966, the collection of new has become a major *desideratum*.

Three genera, eastern North America.

Genus **Auturus** Chamberlin

Auturus Chamberlin, 1942, Bull. Univ. Utah, 32(8): 7. Type species: *A. phanus* Chamberlin, by original designation. – Shelley, 1982, Canadian Journ. Zool., 60: 3251 et seq. (revision).

Four species, two of them with two subspecies; Mississippi Valley and Coastal Plain of southeastern United States, north to Virginia and Minnesota.

Auturus erythropygos erythropygos (Brandt)

Polydesmus erythropygos Brandt, 1839, Bull. Sci. Acad. Imp. Sci. St.-Petersbourg, 5 (20): 313; 1841, "Recueil de mémoires.....", p. 134. ♂ LT (ZMB) labeled "America boreali", later (Chamberlin & Hoffman, 1958) provisionally restricted to Georgetown, South Carolina, a known residence of the collector of the type specimens which is within the known range of this taxon.

Polydesmus erythropygus [*sic!*]: Gervais, 1847, in: Walckenaer, Hist. Nat. Ins. Apt., 4: 106.

Polydesmus (Euryurus) erythropygus: DeSaussure & Humbert, 1872, Miss. Sci. Mexique, Zool., 6(2): 151.

Euryurus erythropygus: Bollman, 1887, Ann. New York Acad. Sci. 4: 108, et auct.seq. plur.

Eutheatus erythropygos: Attems, 1938, Das Tierreich, 69: 294.

Auturus georgianus Chamberlin, 1942, Bull. Univ. Utah, 32(8): 8, fig. 22. ♂ HT (USNM) from 13 miles west of Savannah, Chatham Co., Georgia. Synonymized by Shelley, 1982.

Auturus erythropygos: Hoffman, 1978, Trans. American Entom. Soc., 104: 43.

Auturus erythropygos erythropygos: Shelley, 1982, Canadian Journ. Zool., 60: 1361, figs. 18-22, 25.

Range: Southeastern Virginia to Georgia (map, Shelley, 1982, fig. 25).

The several usages of this specific name by Gervais, DeSaussure & Humbert, Bollman, and Attems, cited above, are included merely to show historical permutations. In all four cases, the species being referred to by those authors were NOT *erythropygos* in the current application of that name.

Auturus erythropygos becki Chamberlin

Auturus becki Chamberlin, 1951, Great Basin Natur., 11: 29, fig. 2 ♂ & ♀ ST (USNM) labeled "Suwannee River, Florida", presumably at a highway crossing in Columbia, Hamilton, or Suwannee counties.

Auturus erythropygos becki: Shelley, 1982, Canadian Journ. Zool., 60: 3262, figs. 23-24.

Range: Northern Florida (Columbia and Suwannee counties); doubtless also adjacent Georgia (map, Shelley, 1982, fig. 25).

Auturus evides (Bollman)

Paradesmus evides Bollman, 1887, Entom. Americana, 2: 229. ♂ HT (not at USNM, presumed lost) from Winona, Winona Co., Minnesota.

Auturus mimetes Chamberlin, 1942, Bull. Univ. Utah, 32(8): 8, fig. 21. ♂ HT (USNM) from one mile NW of Selma, Jefferson Co., Missouri. Synonymized by Shelley, 1982.

Auturus florus Causey, 1950, Ent. News, 61: 37, figs. 1, 2. ♂ HT (ANSP) from Hemmed-in-Hollow at Compton, Newton Co., Arkansas. Synonymized by Causey, 1955.

Auturus evides: Shelley, 1982, Canadian Journ. Zool., 60: 3253, figs. 1-6.

Range: Central United States, from Oklahoma and Arkansas north to southeastern Minnesota (map, Shelley, 1982, fig. 25).

Auturus louisianus louisianus (Chamberlin)

Euryurus louisiana Chamberlin, 1918, Ann. Ent. Soc. America, 11: 371. ♂ HT (MCZ) from Creston, Natchitoches Par., Louisiana.

Auturus louisiana: Causey, 1955, Proc. Biol. Soc. Washington, 68: 22.

Auturus louisianus louisianus: Shelley, 1982, Canadian Journ. Zool., 60: 3257, figs. 7-10.

Range: Northern Louisiana to southwestern Oklahoma (map, Shelley, 1982, fig. 25).

If the position be taken that Chamberlin intended the specific name to be a noun in apposition to the masculine generic name, rather than an adjectival form of the proper name Louis, a case could be made for retention of the original suffix "-iana." I see no reason, however, to disturb existing usage.

Auturus louisianus phanus Chamberlin

Auturus phanus Chamberlin, 1942. Bull. Univ. Utah, 32(8): 7, fig. 20. ♂ HT (USNM) from Greensburg, Ste. Helena Par., Louisiana.

Auturus dixianus: Chamberlin, 1942, Bull. Univ. Utah, 32(8): 8. ♀ HT (USNM) from Covington, St. Tammany Par., Louisiana. Synonymized by Shelley, 1982.

Auturus scotius Chamberlin, 1942, Bull. Univ. Utah, 32(8): 9. ♂ HT (USNM) fom Darlington, Ste. Helena Par., Louisiana. Synonymized by Shelley, 1982.

Auturus louisianus phanus: Shelley, 1982, Canadian Journ. Zool., 60: 3258, figs. 11-12.

Range: Southern Mississippi and eastern Louisiana (map, Shelley, 1982, fig. 25).

Auturus mcclurkini Causey

Auturus mcclurkini Causey, 1955, Proc. Biol. Soc. Washington, 68: 23, fig. 1. ♂ HT (AMNH) from Jackson, Madison Co., Tennessee. – Shelley, 1982, Canadian Journ. Zool., 60: 3259, figs. 13-17.

Range: East of the Mississippi River in Tennessee and Mississippi (map, Shelley, 1982, fig. 25).

Genus **Euryurus** Koch

Euryurus Koch, 1847, System der Myriapoden (fasc. 59): 38. Type species: *Euryurus maculatus* Koch, by direct substitution and synonymy, through subsequent designation of Attems (1938) as type of the replacement name *Eutheatus;* Attems asserted the synonymy of *maculatus* with *Polydesmus erythropygos* Brandt, the name actually stipulated as type of *Eutheatus* but unavailable as not one of the three originally included species. The names *maculatus* and *erythropygos* are no longer considered as congeneric.

Eutheatus Attems, 1938, Das Tierrreich, 69: 294. Proposed as replacement name for *Euryurus*, ipso facto with the same type species (see preceeding entry).

Singuliurus Causey, 1955, Proc. Biol. Soc. Washington, 68: 23. Type species: *S. mississippiensis* Causey, by original designation. Synonymized by Hoffman, 1978.

Euryurus: Hoffman, 1978, Trans. American Entom. Soc., 104: 44 et seq. (revision). – Shelley, 1982, Florida Entom., 65: 254 (distributional records).

Six species, one with two subspecies; eastern United States.

Euryurus amycus Hoffman

Euryurus amycus Hoffman , 1978, Trans. American Entom. Soc., 104: 65, figs, 5, 13, 16. ♂ HT (VMNH) from 1.5 miles south of Oakwood, Wilkes Co., North Carolina.

Range: Single localities in Wilkes and Surry counties, North Carolina.

Euryurus carolinensis (DeSaussure)

Polydesmus carolinensis DeSaussure, 1859, Linnea entom.., 13: 325. ♂ HT (MHNG) labeled only "Caroline du sud".

Euryurus erythropygus: Carl, 1903, Rev. Suisse Zool., 11: 562, fig. 19 (drawing of gonopod of holotype; incorrectly synonymized with this name).

Euryurus carolinensis: Hoffman, 1978, Trans. American Entom. Soc., 104: 62, figs. 6, 9, 12.

Range: Primarily known from the Piedmont region of North Carolina; inferentially from South Carolina although no definite records are yet known for that state (map, Hoffman, 1978, fig. 12).

Euryurus cingulatus Hoffman

Euryurus cingulatus Hoffman, 1978, Trans. American Entom. Soc., 104: 64, figs. 14, 15. ♂ HT (USNM) from 800 Airport Road in Jasper, Walker Co., Alabama.

Range: Five counties in northwestern Alabama (map, Shelley, 1982, fig. 9).

Euryurus leachii leachii (Gray)

Polydesmus Leachii Gray, 1832, in: Edward Gray (ed.): The Animal Kingdom, arranged in Conformity with its Organization by the Baron Cuvier. . .15: pl. 135, figs. 3a-c. ♂ HT (BMNH) without locality data.

Euryurus leachii: Hoffman & Browning, 1956, Ent. News, 67, 186, fig. 1.

Euryurus aculeatus: Causey, 1952, Chicago Acad. Sci. Nat. Hist. Misc., 106: 9, fig. 8. ♂ HT (AMNH) from Giant City State Park, Madison Co., Illinois. Synonymized by Hoffman, 1978.

Euryurus leachii leachii: Hoffman, 1978, Trans. American Entom. Soc., 104: 55, figs. 4, 7, 10, 13.

Range: Central United States: Illinois, Indiana, Ohio, Kentucky (map, Hoffman, 1978, fig. 13).

Euryurus leachii fraternus Hoffman

Euryurus leachii fraternus Hoffman, 1978, Trans. American Entom. Soc., 104: 58, figs. 11, 13. ♂ HT (USNM) from McMinnville, Warren Co., Tennessee.

Range: Primarily in the Appalachian Plateaus physiographic province from western Pennsylvania to extreme northern Mississippi and Alabama (map, Hoffman 1978, fig. 13).

Euryurus mississippiensis (Causey)

Singuliurus mississippiensis Causey, 1955, Proc. Biol. Soc. Washington, 68: 23, fig. 2. ♂ HT (AMNH) from Van Cleave, Jackson Co., Mississippi.

Euryurus mississippiensis Hoffman, 1978, Trans. American Entom. Soc., 104: 65, fig. 12. – Shelley, 1982, Florida Entom., 65: 255, figs. 1, 3-6 (redescription).

Shelley (1982: 255) recounts the circumstances concerning the "loss" of the type material of this species.

Euryurus orestes Hoffman

Euryurus orestes Hoffman, 1978, Trans. American Entom. Soc., 104: 62, figs. 3, 17, 18. ♂ HT (VMNH) from Highlands, Macon Co., North Carolina.

Range: Southern Blue Ridge physiographic province west of the French Broad River, also disjunct population on Wallen Ridge, east Tennessee (map, Hoffman, 1978, fig. 18).

Genus **Illiniurus** Shear

Illiniurus Shear, 1968, Proc. Biol. Soc. Washington, 81: 479. Type species: *I. beattyi* Shear, by original designation.

Monotypic, known only from southern Illinois.

Illiniurus beattyi Shear

Illiniurus beattyi Shear, 1968, Proc. Biol. Soc. Washington, 81: 480. ♂ HT (AMNH, but misplaced or lost), from Clear Springs, Union Co., Illinois.

Family Xystodesmidae Cook

Xystodesmidae Cook, 1895, Ann. New York Acad. Sci., 9: 4.

Fontariidae Attems, 1926, Handb. Zool., 4: 153.

Eurydesmidae Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 16.

Although most of the genera, both Nearctic and Palearctic, have been thoroughly revised during the past three decades, the higher classification remains as suggested by me in 1980: Parafontariinae for one Japanese genus opposed to a Xystodesminae for the remainder of the family. I am by no means satisfied that this is the definitive arrangement, nor that the tribal divisions of the Xystodesminae are entirely satisfactory either.

For the purposes of this list, I have adopted the findings outlined in the most recent treatments, with the exception of the tribe Aphelorini, as discussed thereunder.

Tribe Aphelorini Hoffman

Aphelorini Hoffman, 1980, Classification of the Diplopoda, p. 158.–Shelley, 1986, Mem. American Ent. Soc., 35: 205.

Delimitation of genera in this section of the Xystodesmidae is fraught with difficulty and uncertainty because of the highly subjective character of diagnostic features (dominantly those of male genitalia) and the near impossibility of determining their polarity for objective reconstructions of phylogeny. Species-groups often appear to be fundamentally cohesive, but all too frequently include species which merge gradually into the perimeters of other groups.

The most definitve work on this tribe has come from the hand of R. M. Shelley, who has courageously grasped the thistle that others (myself included) feared to handle and revised most of the Nearctic genera with precision and insight. Nonetheless, in the first steps of any investigation based largely upon the subjective evaluation of subtle, abstract, characters, it would be astonishing if the very nature of the material did not permit alternative interpretations. As with so much of systematic biology, future work with this tribe must involve the judicious selection of a middle ground between the Scylla of a few large and cumbersome genera and the Charybdis of many small and vaguely defined genera. Perhaps molecular genetics will lend some insights into the matter, with the caveat that even molecular data have to be quantified and weighted subjectively by someone.

As noted in an introductory paragraph, I think that use of the subgenus category imposes an unnecessary burden on a classification. In my view, and that of many others, a subgenus might just as well be either a genus or a species-group, if for no other reason (and there are others!) than escaping the redundant parenthetical rider which far too often adds a nomenclatorial complication as genera are combined or divided.

My decision to escalate existing subgenera is not without personal bias since I do consider some of these taxa (*Dixioria, Cleptoria, Stelgipus*, et al.) to merit generic status. The others are borne along on the vehicle of consistency.

Genus **Apheloria** Chamberlin

Apheloria Chamberlin, 1921, Canadian Entom., 53: 232. Type species: *Fontaria montana* Bollman, 1887, by original designation.

Leptocircus Attems, 1931, Zoologica (Stuttgart) 30(3-4): 67. Type species: *L. inexpectatus* Attems, by original designation. Preoccupied by *Leptocircus* Swainson, 1833 (Lepidoptera).

Apheloria Hoffman, 1978, Myriapodologica, 1: 2. – Shelley, 1986, Trans American Entom. Soc., 37: 207.

Number of valid taxa uncertain, pending revision; northeastern and central United States.

A revisionary treatment of this genus, pursued for a number of decades, has still not reached a closure phase, and the following entries represent a medley of confirmed new synonymy (based on examination of relevant type material)for some names and uncertain status for others.

Apheloria montana (Bollman)

Fontaria montana Bollman, 1887, Proc. U. S. Nat. Mus., 10: 622. ♂ HT (USNM) from Wolf Creek [± four miles east of Del Rio], Cocke Co., Tennessee.

Apheloria montana Chamberlin, 1921, Canadian Entom., 53: 232, fig. 2.

Apheloria unaka Chamberlin, 1939, Bull. Univ. Utah, 30(2): 11,. Fig. 33. ♂ HT (USNM) from Unaka Springs, Unicoi Co., Tennessee. **New synonymy!**

Apheloria pinicola Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 26, figs. 6, 7. ♂ HT (ANSP) from Pine Mountain, Bell Co., Kentucky. **New synonymy!**

Apheloria roanea Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 26, fig. 8. ♂ HT (ANSP) from Harriman, Roane Co., Tennessee. **New synonymy!**

Range: Central eastern Tennessee, north into southeastern Kentucky and southwestern Virginia, east into the French Broad River drainage basin of North Carolina, south into northern Alabama and Georgia.

The new synonymy proposed here is based upon examination of the types of all names listed, as well as abundant non-type material.

Apheloria tigana Chamberlin

Apheloria tigana Chamberlin, 1939, Bull. Univ. Utah, 30(2): 11, fig. 29. ♂ HT (USNM) from Raleigh, Wake Co., North Carolina. – Shelley, 1978, Journ. Nat. Hist., 12: 63.

Apheloria waccamana Chamberlin, 1940, Ent. News, 51: 284, fig. 3. ♂ HT (USNM) from Lake Waccamaw, Columbus Co., North Carolina. Synonymized by Shelley, 1978.

Apheloria aspila Chamberlin, 1939, Bull. Univ. Utah, 30(2): 10, fig. 28. ♂ HT (USNM) labeled as from Soco Falls, near Waynesville, North Carolina [on US hy. 19 south of Soco Gap, Jackson Co.]. **New synonymy!**

Range: Coastal southeastern North Carolina, northwest to the Blue Ridge in Floyd and Franklin counties, Virginia.

Although the name *aspila* has one-page priority in Chamberlin's 1939 publication, *tigana* was selected as the senior synonym to avoid the type locality of this species being fixed at a place outside its actual range. The type material of *aspila* was obviously either mislabeled by its collector or while in Chamberlin's hands, a not uncommon accident in either case. The types of all three names cited above have been examined, as well as abundant non-type material.

Apheloria virginiensis virginiensis (Drury), new status.

Julus virginiensis Drury, 1770, Illustrations of natural history.....1: pl. 43, fig. 8. Type material not known to exist, name based on specimens sent to Drury from Dinwiddie Co., Virginia (Shelley, 1980: 131, footnote 6).

Apheloria virginia Chamberlin, 1939, Bull. Univ. Utah, 30(2): 12, fig. 30. ♂ HT (USNM) from Chatham, Pittsylvania Co., Virginia. **New synonymy!**

Apheloria virginiensis [by implication]: Shelley, 1980, Canadian Journ. Zool., 58: 131, footnote 6.

Range: Piedmont and inner Coastal Plain of Virginia, south of the James River.

Treatment of this name as type species of the genus *Fontaria* in the 1958 Checklist by Chamberlin & Hoffman was egregiously incorrect.

Apheloria virginiensis corrugata (Wood), new combination

Fontaria virginiensis C. L. Koch, 1863, Die Myriapoden, 1: 71, pl. 32, fig. 62.

Polydesmus (Fontaria) corrugatus Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 6. ♂ ST (USNM) from Trenton Falls [location undetermined], New York.

Apheloria coriacea: Hoffman, 1949, American Mus. Nov. 1405: 3, figs. 1-4. Incorrect identification of the name *Fontaria coriacea* Koch, 1847.

Apheloria corrugata: Attems, 1938, Das Tierreich, 69: 170.

Apheloria adela Chamberlin, 1939, Bull. Univ. Utah, 30(2): 10, fig. 34. ♂ HT (USNM) from Ithaca, Tompkins Co., New York. Synonymized by Hoffman, 1957.

Apheloria corrugata corrugata: Hoffman, 1957, Proc. Biol. Soc. Washington, 70: 183.

Range: Northeastern North America, from southeastern Virginia north to Montreal, Canada.

Apheloria virginiensis butleriana (Bollman), new combination

Fontaria butleriana Bollman, 1889, Proc. U. S. Nat. Mus., 11: 407. ♀ HT (USNM) from Brookville, Franklin Co., Indiana.

Apheloria butleriana: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 18.

Apheloria corrugata butleriana: Hoffman, 1957, Proc. Biol. Soc. Washington, 70: 186, footnote.

Apheloria asburna: Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 101. ♂ HT (USNM) from 20 miles north of Nashville, Davidson Co., Tennessee. **New synonymy**!

?*Leptocircus inexpectatus* Attems, 1931, Zoologica (Stuttgart), 30(3-4): 67, figs. 102-104. ♂ HT (NMW) from an unspecified locality in North America. **Provisional new synonymy.**

Range: Ohio and Indiana, south to central Tennessee. Intergrades with the preceeding in West Virginia.

Apheloria virginiensis iowa Chamberlin, new status, new combination

Apheloria iowa Chamberlin, 1939, Bull. Univ. Utah, 30(2): 10, fig. 28. ♂ HT (USNM) from Mount Pleasant, Henry Co., Iowa.

Range: Eastern Iowa and adjacent Illinois, doubtless merging into the following subspecies.

Apheloria virginiensis reducta Chamberlin, new status, new combination

Apheloria reducta Chamberlin, 1939, Bull. Univ. Utah, 30(2): 11, fig. 35. ♂ HT (USNM) from Imboden, Lawrence Co., Arkansas.

Range: Ozark-Ouachita highlands, Arkansas and Missouri.

SPECIES OF UNCERTAIN STATUS

?Aphèloria luminosa (Kenyon)

Fontaria luminosa Kenyon, 1893, Publ. Nebraska Acad. Sci., 3: 16. Type material not known with certainty, apparently originating at Omaha, Douglas Co., Nebraska. – Chamberlin & Hoffman, 1958, Bull.U. S. Nat. Mus. 212: 55 ("likely to prove to be a species of *Apheloria")*.

Apheloria [by implication] *luminosa*: Shelley, 1986, Mem. American Entom. Soc., 37: 209.

Shelley (loc. cit.) presented evidence that the species described by Kenyon is referable to *Apheloria,* and the original account of coloration, size, and genitalia tend to support such a placement. There is however a substantial disjunction between Omaha and the nearest genuine localities for this genus in Iowa and Missouri, both Dr. Shelley and I have failed to rediscover it in riparian forest along the Missouri River south of Omaha, and the University of Nebraska entomology collection has no material of any xystodesmid from that state. Before assuming *luminosa* to be a senior synonym of *A. v. iowa,* I prefer to await confirmation through the collection of fresh material in southeastern Nebraska.

Genus **Brachoria** Chamberlin

Brachoria Chamberlin, 1939, Bull. Univ. Utah, 30(2): 3. Type species: *B. initialis* Chamberlin, by original designation. – Keeton, 1959, Proc. U. S. Nat. Mus., 109: 3 et seq.; 1965, Proc. Biol. Soc. Washington, 78: 225.

Tucoria Chamberlin, 1943, Bull. Univ. Utah, 00: 17. Type species: *Fontaria kentuckiana* Causey, 1942, by original designation. Synonymized by Keeton, 1959.

Anfractogon Hoffman, 1948, Proc. Biol. Soc. Washington, 61: 94. Type species: *A. tenebrans* Hoffman, by original designation. Synonymized by Chamberlin & Hoffman, 1958.

26 nominal species, central eastern United States (Pennsylvania and Ohio south to Alabama and Mississippi).

Brachoria calceata (Causey)

Tucoria calceata Causey, 1955, Proc. Biol. Soc. Washington, 68: 28, figs. 4, 5. ♂ HT (AMNH) from Tyrone, Anderson Co., Kentucky.

Brachoria calceata: Keeton, 1959, Proc. U. S. Nat. Mus., 109: 16, figs. 1h-j.

Brachoria cedra Keeton

Brachoria cedra Keeton, 1959, Proc. U. S. Nat. Mus., 109: 17, figs. 2a-c. ♂ HT (USNM) from cedar glades 5-6 miles west of Jonesville, Lee Co., Virginia. – Hoffman, 1971, Radford Review, 25: 85, fig. 2.

Range: Several localities in Lee Co., Virginia.

Incorrectly synonymized with *B. initialis* by Keeton (1965: 233).

Brachoria conta Keeton

Brachoria conta Keeton, 1965, Proc. Biol. Soc. Washington, 78: 225, figs. 1-3. ♂ HT (USNM) from woods along US Hy. 460, five miles west of Grayson, Carter Co., Kentucky.

Brachoria dentata Keeton

Brachoria dentata Keeton, 1959, Proc. U. S. Nat. Mus., 109: 18, figs. 2d-f. ♂ HT (USNM) from Pennington Gap, Lee Co., Virginia.

Brachoria divicuma Keeton

Brachoria divicuma Keeton, 1965, Proc. Biol. Soc. Washington, 78: 229, figs. 6-8. ♂ HT (USNM) from mountainside two miles west of Jamestown, Fentress Co., Tennessee.

Brachoria electa Causey

Brachoria electa Causey, 1955, Proc. Biol. Soc. Washington, 68: 25, fig. 3. ♂ HT (AMNH) from Tyrone, Anderson Co., Kentucky.

Range: Anderson and Mercer counties, Kentucky.

Considered by Keeton to be almost certainly a junior synonym of *B. initialis.*

Brachoria enodicuma Keeton

Brachoria enodicuma Keeton, 1965, Proc. Biol. Soc. Washington, 78: 228, figs. 4-5. ♂ HT (USNM) from mountainside 1.5 miles NE of Hodge, Jackson Co., Alabama.

Brachoria eutypa eutypa Chamberlin

Brachoria eutypa Chamberlin, 1939, Bull. Univ. Utah, 30(2): 4, fig. 4. ♂ HT (USNM) from Russelville, Hamblen Co., Tennessee.

Brachoria eutypa eutypa: Keeton, 1959, Proc. U. S. Nat. Mus., 109: 21, figs. 3a-g; 1965, Proc. Biol. Soc. Washington, 78: 232.

Range: Eastern Tennessee, chiefly between Bristol and Knoxville.

Brachoria eutypa ethotela Chamberlin

Brachoria ethotela Chamberlin, 1942, Bull. Univ. Utah, 32(8): 5, fig. 13. ♂ HT (USNM) from Marion, Smyth Co., Virginia. – Hoffman, 1971, Radford Review, 25: 95.

Brachoria eutypa ethotela : Keeton, 1959, Proc. U. S. Nat. Mus., 109: 23, figs. 3h-j.

Range: Southwestern Virginia: Washington, Smyth, Wythe, Pulaski counties.

I have already (1971) expressed doubts that *ethotela* is subspecifically related to *eutypa.*

Brachoria falcifera Keeton

Brachoria falcifera Keeton, 1959, Proc. U. S. Nat. Mus., 109: 27, figs. 4a-c. ♂ HT (USNM) from "Grimsleyville" [merely a place name on US Hy. 460, ca. six miles SE of Keen Mountain], Buchanan Co., Virginia.

Brachoria glendalea (Chamberlin)

Fontaria glendalea Chamberlin, 1918, Psyche, 25: 123. ♂ HT (MCZ) from Glendale Hills, Nashville, Davidson Co., Tennessee.

Brachoria glendalea: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 24. – Keeton, 1959, Proc. U. S. Nat. Mus. 109: 28, figs. 4d-f.

Range: Central Tennessee: Cumberland, Hickman, Perry counties.

Brachoria gracilipes (Chamberlin)

Sigmoria gracilipes Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 29, fig. 15. ♂ HT (ANSP) from Stone Mountain, Harlan Co., Kentucky.

Brachoria gracilipes: Shelley, 1979, Florida Entom., 62: 220, figs. 1-3.

Brachoria hansonia Causey

Brachoria hansonia Causey, 1950, Ent. News, 61: 6, fig. 1. ♂ HT (ANSP) from Kentucky Ridge State Forest, Pineville, Bell Co., Kentucky.

Brachoria hoffmani Keeton

Brachoria hoffmani Keeton, 1959, Proc. U. S. Nat. Mus. 109: 32, figs. 5d-f. ♂ HT (USNM) from woods beside Va. Hy. 83, one mile west of Vansant, Buchanan Co., Virginia. – Hoffman, 1971, Radford Review, 25: 37, fig. 3.

Range: Extreme southwestern Virginia and adjacent Kentucky (map, Hoffman, 1971, fig. 3).

Brachoria hubrichti Keeton

Brachoria hubrichti Keeton, 1959, Proc. U. S. Nat. Mus., 109: 33, figs. 5g-i. ♂ HT (USNM) from McMinnville, Warren Co., Tennessee; 1965, Proc. Biol. Soc. Washington, 78: 233, figs. 13, 14.

Range: Southeastern Tennessee: Hamilton, Sequatchie, and Warren counties.

Brachoria indianae (Bollman)

Fontaria indianae Bollman, 1888, Proc. U. S. Nat. Mus. 11: 406. ♂ LT (USNM) from Brookville, Franklin Co., Indiana.

Brachoria indianae: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 24. – Keeton, 1959, Proc. U. S. Nat. Mus., 109: 34, figs. 6a-c (selection of lectotype).

Range: Southern Indiana, northcentral Kentucky (map, Keeton, 1965, fig. 26).

Brachoria initialis Chamberlin

Brachoria initialis Chamberlin, 1939, Bull. Univ. Utah, 30(2): 3, fig. 3. ♂ HT (USNM) from Maplesville, Chilton Co., Alabama. – Keeton, 1965, Proc. Biol. Soc. Washington, 78: 233, figs. 17, 19, 20, 22, 23.

Brachoria brachypus Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 26, fig. 9. ♂ HT (ANSP) from Harriman, Roane Co., Tennessee. Synonymized by Keeton, 1959.

Brachoria benderi Causey, 1950, Ent. News, 61: 193, fig.s. 1, 2. ♂ HT (ANSP) from Piney Woods, Rankin Co., Mississippi. Synonymized by Keeton, 1959.

Brachoria ochra initialis: Keeton, 1959, Proc. U. S. Nat. Mus., 109: 11, figs. 1-a-c.

Range: Eastern Tennessee to central Alabama, possibly southern Mississippi (map, Keeton, 1965, fig. 26)

Keeton's analysis of geographic variation in size of the telopodite was flawed in recording the measurement as an actual value rather than as a proportion of body size (which varies substantially).

Brachoria insolita Keeton

Brachoria insolita Keeton, 1959, Proc. U. S. Nat. Mus. 109: 36, figs. 6d-f. ♂ HT (USNM) from High Knob, two miles south of Norton, Wise Co., Virginia.

Brachoria kentuckiana (Causey)

Fontaria kentuckiana Causey, 1942, Ent. News, 53: 167, figs. 3, 4. ♂ HT (ANSP) from Cumberland Falls State Park, Cumberland Co., Kentucky.

Cleptoria kentuckiana: Causey, 1943, Ent. News, 54: 264.

Tucoria kentuckiana: Chamberlin, 1943, Bull. Univ. Utah, 34(6): 17.

Brachoria kentuckiana: Keeton, 1959, Proc. U. S. Nat. Mus., 109: 38, figs. 6g-i.

Brachoria laminata Keeton

Brachoria laminata Keeton, 1959, Proc. U. S. Nat. Mus., 109: 39, figs. 7a-c. ♂ HT (USNM) from roadside sawmill site on Va. Hy. 83, three miles SW of Vansant, Buchanan Co., Virginia.

Brachoria ligula Keeton

Brachoria ligula Keeton, 1959, Proc. U. S. Nat. Mus., 109: 40, figs. 7d-f. ♂ HT (USNM) from 1.3 miles east of Premier, McDowell Co., West Virginia..

Brachoria mendota Keeton

Brachoria mendota Keeton, 1959, Proc. U. S. Nat. Mus., 109: 42, figs. 7, g, h. ♂ HT (USNM) from two miles south of Fugate Hill, west side of Clinch Mountain ("opposite Mendota"), Russell Co., Virginia.– Hoffman, 1971, Radford Review, 25: 84.

Brachoria ochra (Chamberlin)

Fontaria ochra Chamberlin, 1918, Psyche, 25: 123. ♂ HT (USNM) from "Agricultural College" [now Mississippi State University], Starkville, Oktibbeha Co., Mississippi.

Brachoria sequens Chamberlin, 1939, Bull. Univ. Utah, 30(2): 4, fig. 2. ♂ HT (USNM) from "Agricultural College", Oktibbeha Co., Mississippi. Synonymized by Keeton, 1959.

Anfractogon tenebrans Hoffman, 1948, Proc. Biol. Soc. Washington, 61: 94, figs. 1-3. ♂ HT (USNM) from Winston Co., Alabama. Synonymized by Keeton, 1965.

Brachoria ochra: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 25. – Keeton, 1965, Proc. Biol. Soc. Washington, 78: 237, figs. 15, 16.

Brachoria ochra ochra: Keeton, 1959, Proc. U. S. Nat. Mus. 109: 10.

Range: Northern Mississippi and northwest Alabama (map, Keeton, 1965, fig. 26).

Brachoria plecta Keeton

Brachoria plecta Keeton, 1959, Proc. U. S. Nat. Mus. 109: 43, figs. 8a-e. ♂ HT (AMNH) from Natural Bridge, Powell Co., Kentucky.

Brachoria separanda separanda Chamberlin

Brachoria separanda Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 28, fig. 10. ♂ HT (ANSP) from Jennings, Garrett Co., Maryland. – Keeton, 1959, Proc. U. S. Nat. Mus. 109: 44, figs. 8g-i.

Brachoria separanda separanda: Hoffman, 1971, Radford Review, 25: 89, fig. 4.

Range: Western Maryland, northeastern West Virginia.

Brachoria separanda calcaria Keeton

Brachoria calcaria Keeton, 1959, Proc. U. S. Nat. Mus., 109: 15, figs. 1d-g. ♂ HT (USNM) from Blacksburg, Montgomery Co., Virginia.

Brachoria separanda calcaria: Hoffman, 1971, Radford Review, 25: 96, fig. 5.

Range: Southwestern Virginia (Montgomery, Giles, Pulaski counties); adjacent West Virginia (map, Hoffman, 1971, fig. 11).

Brachoria separanda hamata Keeton

Brachoria hamata Keeton, 1959, Proc. U. S. Nat. Mus. 109: 30, figs. 4g-i. ♂ HT (USNM) from east slope Beartown Mountain, Burkes Garden, Tazewell Co., Virginia.

Brachoria separanda hamata: Hoffman, 1971, Radford Review, 25: 94, figs. 9, 10.

Range: Southwestern Virginia (Tazewell and Bland counties) (map, Hoffman, 1971, fig. 11).

Brachoria separanda versicolor Hoffman

Brachoria versicolor Hoffman, 1963, Proc. Biol. Soc. Washington, 76: 223, figs. 1, 2. ♂ HT (USNM) from 11 miles northwest of Wytheville, Wythe Co., Virginia.

Brachoria separanda versicolor: Hoffman, 1971, Radford Review, 25: 93, fig. 8.

Range: Southwestern Virginia (Wythe and Bland counties) (map, Hoffman, 1971, fig. 11).

Brachoria splendida (Causey)

Cleptoria splendida Causey, 1942, Ent. News, 53: 167, fig. 5. ♂ HT (ANSP) from Pine Mountain State Park, Bell Co., Kentucky.

Tucoria dynama Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 29, fig. 16. ♂ HT (ANSP) from Pine Mountain, Bell Co., Kentucky. Synonymized by Chamberlin & Hoffman, 1958.

Brachoria turneri Keeton

Brachoria turneri Keeton, 1959, Proc. U. S. Nat. Mus. 109: 49, figs. 9e-g. ♂ HT (USNM) from bluff along North Fork Holston River, two miles SE of Hayter's Gap, Washington Co., Virginia.

Brachoria viridicolens (Hoffman)

Tucoria viridicolens Hoffman, 1948, Journ. Washington Acad. Sci., 38: 349, figs. 5, 6. ♂ HT (USNM) from Trace Creek at Greensburg, Green Co., Kentucky.

Genus **Brevigonus** Shelley

Brevigonus Shelley, 1980, Brimleyana, 3: 32. Type species: *Cleptoria shelfordi* Loomis, 1944, by original designation. Synonymized with *Sigmoria* subgenus *Cleptoria* by Shelley, 1986.

Two species: western South Carolina.

Brevigonus arcuata Shelley

Brevigonus arcuata Shelley, 1981, Brimleyana, 6: 56, figs. 1-5. ♂ HT (USNM) from George's Creek at SC Hy. 192, 8.5 miles east if Pickens, Pickens Co., South Carolina.

Sigmoria (Cleptoria) arcuata: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc. 35: 94.

Range: Western South Carolina, Anderson, Abbeville, and Pickens cos. (map, Shelley, 1986, fig. 93).

Brevigonus shelfordi (Loomis)

Cleptoria shelfordi Loomis, 1944, Psyche, 51: 172, fig. 4. ♂ HT (MCZ) from the DeLaHowe Forest, about seven miles west of McCormick, McCormick Co., South Carolina.

Brevigonus shelfordi: Shelley, 1980, Brimleyana, 3: 3, figs. 1-13.

Sigmoria (Cleptoria) shelfordi: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc. 35: 92.

Range: Eastern side of the Savannah River in western South Carolina, Abbeville and McCormick cos. (map, Shelley, 1986, fig. 93).

Genus **Cheiropus** Loomis

Cheiropus Loomis, 1944, Psyche, 51: 171. Type species: *C. plancus* Loomis, by original designation.

One species, southeastern United States.

Considered a subgenus of *Sigmoria* by Shelley, in Shelley & Whitehead, 1996. I cannot concur with the combination of *Lyrranea* and *Stelgipus* under this generic name as proposed by Shelley (1984).

Cheiropus plancus Loomis

Cheiropus plancus Loomis, 1944, Psyche, 51: 171, figs. 3a-b. ♂ HT (MCZ) from Thomasville, Thomas Co., Georgia.

Sigmoria (Cheiropus) plancus: Shelley, 1984, Proc. Biol. Soc. Washington, 97: 267, figs. 1-7.

Range: Southwestern Georgia, south and east as far as Hernando Co., Florida (map, Shelley, 1984, fig. 23).

Genus **Cleptoria** Chamberlin

Cleptoria Chamberlin, 1939, Bull. Univ. Utah, 30(2): 9. Type species, *C. macra* Chamberlin, by original designation. – Hoffman, 1967, Proc. U. S. Nat. Mus., 124: 1 (revision) – Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 76.

Shelley (1986) treated this taxon as a subgenus of *Sigmoria.*

Cleptoria abbotti Hoffman

Cleptoria abbotti Hoffman, 1967, Proc. U. S. Nat. Mus., 124: 18, figs, 13-16. ♂ HT (USNM) from five miles west of Waynesboro, Burke Co., Georgia.

Sigmoria (Cleptoria) abbotti: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 81, figs. 53-55.

Range: Seven counties in northeastern Georgia, chiefly in the Savannah River drainage (map, Shelley, 1986, fig. 68).

Cleptoria bipraesidens Hoffman

Cleptoria bipraesidens Hoffman, 1967, Proc. U. S. Nat. Mus., 124: 16, fig. 11. ♂ HT (USNM) from Jefferson, Jackson Co., Georgia.

Sigmoria (Cleptoria) bipraesidens: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 84, figs. 56-59.

Range: Known so far only from the type locality.

Cleptoria macra Chamberlin

Cleptoria macra Chamberlin, 1939, Bull. Univ. Utah, 30(2): 9, figs. 36, 37. ♂ HT (USNM) from Taylors, Greenville Co., South Carolina. – Hoffman, 1967, Proc. U. S. Nat. Mus., 124: 7, figs. 3, 5, 6, 12.

Sigmoria (Cleptoria) macra: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 89, figs. 64-67.

Range: Western South Carolina (Greenville and Newberry cos.) (map, Shelley, 1986, fig. 68).

Cleptoria rileyi (Bollman)

Fontaria rileyi Bollman, 1889, Proc. U. S. Nat. Mus., 10: 345. ♂ HT (USNM) from Macon, Bibb Co., Georgia.

Cleptoria rileyi: Chamberlin, 1939, Bull. Univ. Utah, 30(2): 9.

Cleptoria rileyi rileyi: Hoffman, 1967, Proc. U. S. Nat. Mus., 124: 12, figs. 2, 7, 8, 12.

Cleptoria rileyi alabama: Hoffman, 1967, Proc. U. S. Nat. Mus., 124: 16, figs. 9, 10, 12. ♂ HT (USNM) from Auburn, Lee Co., Alabama. Synonymized by Shelley, 1986.

Sigmoria (Cleptoria) rileyi: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 79, figs. 50-52.

Range: Piedmont region of central Georgia and eastern Alabama (map, Shelley, 1986, fig. 68).

Cleptoria robusta Shelley

Sigmoria (Cleptoria) robusta Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 86, figs. 60-63.

Range: Western South Carolina (Oconee and Anderson counties) (map, Shelley 1986, fig. 68).

Genus **Croatania** Shelley

Croatania Shelley, 1977, Proc. Biol. Soc. Washington, 90: 305. Type species: *C. catawba* Shelley, by original designation.

Four species: central Piedmont of South Carolina and adjacent parts of North Carolina (map, Shelley, 1986, fig. 49).

Croatania catawba Shelley

Croatania catawba Shelley, 1977, Proc. Biol. Soc. Washington, 90: 306, figs. 1, 2, 7, 11, 12, 16. ♂ HT (USNM) from 5.8 mi. South Kings Mountain on Rt. 2245, Cleveland Co., North Carolina.

Sigmoria (Croatania) catawba: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 71.

Range: Lincoln Co., North Carolina, southeastward to Union Co., South Carolina.

Croatania saluda Shelley

Croatania saluda Shelley, 1977, Proc. Biol. Soc. Washington, 90: 312, figs. 3, 8, 13. ♂ HT (USNM), from site near Chiles Branch Creek, S. C. Hy. 48, 0.1 mile west junction with Hy. 63, 12 miles south of Greenwood, Greenwood Co., South Carolina.

Sigmoria (Croatania) saluda: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 70.

Range: Recorded from eight counties in central South Carolina, between the Enoree and Savannah rivers.

Croatania simplex Shelley

Croatania simplex Shelley, 1977, Proc. Biol. Soc. Washington, 90: 316, figs. 4, 5, 9, 14. ♂ HT (USNM) from Chester State Park, Chester Co., South Carolina.

Sigmoria (Croatania) simplex: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 72, figs. 46-48 (description, distribution).

Range: Recorded from six counties in the Piedmont and Coastal Plain of South Carolina.

Croatania yemassee Shelley

Croatania yemassee Shelley, 1977, Proc. Biol. Soc. Washington, 90: 319, figs. 6, 10, 15. ♂ HT (VMNH) from oak woods eight miles south of Hardeville, Jasper Co., South Carolina.

Range: Two localities along the seacoast in southeastern South Carolina.

Genus **Deltotaria** Causey

Deltotaria Causey, 1942, Ent. News, 53: 165. Type species: *D. brimleii* Causey, by original designation. – Hoffman, 1961, Proc. U. S. Nat. Mus. 113: 22. – Shelley, 1986, Mem. American Entom. Soc., 35: 147 (revision).

Phanoria Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 101. Type species: *P. philia* Chamberlin, by original designation. Synonymized by Chamberlin & Hoffman, 1958.

Four species, southern Blue Ridge, North Carolina, Tennessee, Georgia.

Deltotaria brimleii brimleii Causey

Deltotaria brimleii Causey, 1942, Ent. News, 53: 165, figs. 1, 2. ♂ HT (ANSP) from Swannanoa, Buncombe Co., North Carolina. – Hoffman, 1961, Proc. U. S. Nat. Mus., 113: 25, fig. 2c

Deltotaria brimleii brimleii: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 151, figs. 27-30.

Range: Southern Blue Ridge in at least eastern Buncombe Co., North Carolina.

Deltotaria brimleii tela Causey

Deltotaria tela Causey, 1950, Ent. News, 61: 38, figs. 3-5. ♂ HT (ANSP) from Bent Creek Experiment Station, southwest of Asheville, Buncombe Co., North Carolina. – Hoffman, 1961, Proc. U. S. Nat. Mus., 113: 31, figs. 1b,d; 2a.

Considered a strict junior synonym of *b. brimleii* by Shelley, 1986.

Deltotaria brimleii brimleardia Causey, new status

Deltotaria brimleardia Causey, 1950, Ent. News, 61: 7, figs. 2,3. ♂ HT (ANSP) from along Ramsey Prong, Gatlinburg, Sevier Co., Tennessee. – Hoffman, 1961, Proc. U. S. Nat. Mus., 113: 30, fig. 2b.

Considered a strict junior synonym of *b. brimleii* by Shelley, 1986.

Deltotaria brimleii mariana Hoffman, new status

Deltotaria mariana Hoffman, 1961, Proc. U. S. Nat. Mus., 113: 28, figs. 1a, e-h. ♂ HT (USNM) from Pink Beds Recreation Area, ca 8 miles northwest of Brevard, Transylvania Co., North Carolina.

Range: Southern Blue Ridge southwest of Asheville, North Carolina (Transylvania, Macon, Jackson counties, probably others).

Considered a strict synonym of *b. brimleii* by Shelley, 1986.

Deltotaria lea Hoffman

Deltotaria lea Hoffman, 1961, Proc. U. S. Nat. Mus., 113: 33, figs. 1c, 3a. ♂ HT (USNM) from 4.5 miles SE of Lincolnton, Lincoln Co., North Carolina.– Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 157, figs. 141-144.

Range: A limited area in the western Piedmont of North Carolina and adjacent South Carolina (map, Shelley, 1986, fig. 146).

Deltotaria philia (Chamberlin)

Phanoria philia Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 101, fig. 25. ♂ HT (USNM) from Clarksville, Habersham Co., Georgia.

Deltotaria philia: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 30. – Hoffman, 1961, Proc. U. S. Nat. Mus., 113: 34, fig. 3b.

Deltotaria brimleii philia: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 155, figs. 137-140.

Range: Extreme western counties of North and South Carolina, extreme northern Georgia (map, Shelley, 1986, fig. 146).

Genus **Dixioria** Chamberlin

Dixioria Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 28. Type species: *D. dentifer* Chamberlin, by original designation. – Hoffman, 1956, Proc. U. S. Nat. Mus., 106: 1 (synopsis). – Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 45 (revision, as subgenus of *Sigmoria*).

Four species, one of them with four subspecies, southern Appalachian Mountains.

Dixioria brooksi Hoffman

Dixioria pela brooksi Hoffman, 1956, Proc. U. S. Nat. Mus., 106: 12, fig. 1d. ♂ HT (USNM) from Holston Mountain at Damascus, Washington Co., Virginia.

Dixioria brooksi: Hoffman, 1969, Va. Polytech. Inst., Res. Div.Monogr. 1: 227. – Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 59, figs. 37-40.

Range: A limited area along Holston Mountain near and southwest of Damascus, Virginia (map, Shelley, 1986, fig. 45).

Dixioria dactylifera Hoffman

Dixioria dactylifera Hoffman, 1956, Proc. U. S. Nat. Mus. 106: 15, fig. 2. ♂ TPT (AMNH) from Mill Hill (not located), Ashe Co., North Carolina. – Shelley, 1986, Mem. American Entom. Soc., 35: 63, figs. 41-44.

Range: Recorded from three localities in Ashe Co., North Carolina (map, Shelley, 1986, fig. 45).

Dixioria fowleri Hoffman, new status

Dixioria pela fowleri Hoffman, 1956, Proc. U. S. Nat. Mus., 106: 13, fig. 1e. ♂ HT (USNM) from west side of Walker Mountain, U. S. Hy. 52, Bland Co., Virginia.

Range: Type locality and Burkes Garden, Tazewell Co., Virginia (other previous records require confirmation).

Shelley (1986: 55) considered this form to be identical with *coronata*. In my view the telopodite forms a smaller, closer circle as seen in dorsal (lateral) view, with the apical solenomere region thicker than in *coronata*, in fact much more similar to the configuration in both *dactyligera* and *watauga* with which conspecificity seems more likely.

Dixioria pela acuminata Hoffman

Dixioria pela acuminata Hoffman, 1956, Proc. U. S. Nat. Mus., 106: 11, fig. 1b. ♂ HT (USNM) from crest of Holston Mountain, two miles west of Shady Valley on US Hy. 421, Johnson Co., Tennessee.

Dixioria acuminata Shelley, 1986, Mem. American Entom. Soc., 35: 50, figs. 25-27.

Range: Two localities in Johnson Co., Tennessee (map, Shelley, 1986, fig. 45).

Dixioria pela coronata Hoffman

Deltotaria coronata Hoffman, 1949, Proc. U. S. Nat. Mus., 99: 380, figs. 7, 8. ♂ HT (USNM) from east slope of Mount Rogers, 5000 ft., Grayson Co., Virginia.

Dixioria pela coronata: Hoffman, 1956, Proc. U. S. Nat. Mus., 106: 12, fig. 1c.

Dixioria coronata: Shelley, 1986, Mem. American Entom. Soc., 35: 52, figs. 28-30.

Range: Vicinity of Mount Rogers, Virginia, southward through the Iron and Unicoi mountains to Watauga Co., North Carolina (map, Shelley, 1986, fig. 45).

Dixioria pela pela (Chamberlin)

Fontaria pela Chamberlin, 1918, Psyche, 25: 122. ♂ HT (?location uncertain at present) from Burbank, Carter Co., Tennessee [♂ and ♀ PT in MCZ].

Dixioria dentifer Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 28, fig. 13. ♂ HT (ANSP) from Cranberry, Avery Co., North Carolina. Synonymized by Hoffman, 1956.

Dixioria pela pela: Hoffman, 1956, Proc U. S. Nat. Mus., 106: 8, fig. 1a.

Dixioria pela: Shelley, 1986, Mem. American Entom. Soc., 35: 46, figs. 18-24.

Range: Southern Blue Ridge in Carter and Unicoi counties, Tennessee and Avery, Mitchell, and McDowell counties, North Carolina (map, Shelley, 1986, fig. 45).

Dixioria pela wrighti Hoffman

Dixioria pela wrighti Hoffman, 1956, Proc. U. S. Nat. Mus., 106: 15, fig. 1f. ♂ HT (USNM) from east side of Grandfather Mountain along US Hy. 221, ca. five road miles northeast of Linville, Avery Co., North Carolina.

Dixioria wrighti Shelley, 1986, Mem. American Entom. Soc., 35: 55, figs. 32-34.

Range: Watauga and Avery counties, North Carolina (map, Shelley, 1986, fig. 45).

Dixioria watauga Shelley

Dixioria watauga Shelley, 1986, Mem. American Entom. Soc., 35: 58, figs. 35, 36. ♂ HT (USNM) from Goforth Road, 0.5 miles north of US Hy. 321, Blowing Rock, Watauga Co., North Carolina.

Range: Blue Ridge in southern Watauga Co., North Carolina (map, Shelley, 1986, fig. 45).

A similarity in the gonopods of this species and *fowleri* is noted under the entry for that name.

Genus **Dynoria** Chamberlin

Dynoria Chamberlin, 1939, Bull. Univ. Utah, 30(2): 7. Type species: *D. icana* Chamberlin, by original designation. – Shelley, 1984, Proc. Biol. Soc. Washington, 97: 92.

Two species, western Piedmont region of Georgia; Blue Ridge in northern Georgia and adjacent parts of North and South Carolina.

I am not convinced that the two species assigned to *Dynoria* are congeneric.

Dynoria icana Chamberlin

Dynoria icana Chamberlin, 1939, Bull. Univ. Utah, 30(2): 7, figs. 13, 14. ♂ HT (USNM) from Tallulah Falls, Habersham Co., Georgia. – Shelley, 1984, Proc. Biol. Soc. Washington, 97: 93, figs. 1-5.

Range: Recorded only from five localities in Rabun and Habersham cos., Georgia, Oconee Co., South Carolina, and Macon Co., North Carolina (map, Shelley, 1984, fig. 10).

Dynoria medialis Chamberlin

Dynoria medialis Chamberlin, 1949, Proc. Biol. Soc. Washington, 62: 3, figs. 5, 6. ♂ HT (USNM) from Atlanta, Georgia, without closer specification. – Shelley, 1984, Proc. Biol. Soc. Washington, 97: 97, figs. 6-9.

Range: Central and western Georgia, from vicinity of Atlanta southward, west of the Chattahoochee River, to Early Co., Georgia (map, Shelley, 1984, fig. 10).

Genus **Falloria** Hoffman

Falloria Hoffman, 1948, Proc. Biol. Soc. Washington, 61: 93. Type species: *Apheloria bidens* Causey,1942, by original designation. – Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 106 (as subgenus of *Sigmoria*).

Hubroria Keeton, 1960, Journ. Brooklyn Entom. Soc., 55: 42. Type species: *H. picapa* Keeton, by original designation. Synonymized by Shelley, 1986.

17 species, southern Appalachians, Cumberland Plateau, and Interior Basins.

As treated by Shelley (1986: 106 et seq.) *Falloria* is a very "heterogeneous asemblage" having only an ambiguous definition based largely upon color pattern. In many, perhaps most, of the species, the prefemoral process is enlarged, bifurcated, or both; in others (e.g., *prolata, apheloroides*) this process is small and acuminate. In species of the Mimetica Group in central Tennessee, the telopodite is remarkably short and massive, and approximates the form of an unnamed species of *Brachoria* occurring in the same general area (as well as several Kentucky species for which the name *Tucoria* had been applied.

In my view, *Falloria* might be dismembered, with some species-groups given generic rank and others merged into *Sigmoria*. As with other kinds of radical surgery, a third, objective, evaluation of existing evidence would be a desireable antecedent. For the present, in a departure from the regular format of this list, I document the known species in the groups recognized by Dr. Shelley in order to keep related taxa together.

Aphelorioides Group

Falloria aphelorioides Shelley

Sigmoria (Falloria) aphelorioides Shelley, 1986, Mem. American Entom. Soc., 35: 111, figs. 84-87. ♂ HT (USNM) from Tenn. Hy. 165, 17.3 miles southeast Madisonville, Monroe Co., Tennessee.

Range: Extreme southeastern Tennessee (Monroe and McMinn cos.) and adjacent North Carolina (Swain Co.) (map, Shelley, 1986, fig. 125).

Bidens Group

Falloria bidens (Causey)

Apheloria bidens Causey, 1942, Ent. News, 53: 169, fig. 9. ♂ HT (ANSP) from Chimneys Picnic Area, ca. 7 miles south of Gatlinburg, on U.S. Hy. 441, Great Smoky Mountains National Park, Sevier Co., Tennessee

Falloria bidens: Hoffman, 1948, Proc. Biol. Soc. Washington, 61: 93.

Dixioria bidens: Causey, 1950, Ent. News, 61: 6.

Sigmoria bidens: Shelley, 1981, Mem. American Entom. Soc., 33: 82, figs. 78-81.

Range: Numerous localities in eastern Sevier Co., Tennessee (map, Shelley 1986, fig. 147).

Falloria prolata Shelley

Sigmoria (Falloria) prolata Shelley, 1986, Mem. American Entom. Soc., 35: 107, figs. 77-83. ♂ HT (USNM) from Ramsey Cascade Parking Area, Great Smoky Mountains National Park, Sevier Co., Tennessee.

Range: Vicinity of Gatlinburg, Sevier Co., Tennessee (map, Shelley 1986, fig. 125).

Leucostriata Group

Falloria leucostriata (Shelley)

Sigmoria leucostriata Shelley, 1981, Mem. American Entom. Soc., 33: 87, figs. 82-85. ♂ HT (USNM) from a site on Cty. Rt. 2485, 10 miles south of Newport, Cocke Co., Tennessee.

Sigmoria (Falloria) leucostriata Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 107.

Range: Cocke and Sevier cos., Tennessee (map, Shelley, 1981, fig. 132).

Falloria xerophylla (Shelley)

Sigmoria xerophylla Shelley, 1981, Mem. American Entom. Soc., 33: 89, figs. 86-89. ♂ HT (USNM) from a site along Cty. Rt. 4371, eight miles south of Athens, McMinn Co., Tennessee.

Sigmoria (Falloria) xerophylla: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 107.

Range: Extreme southeastern Tennessee and adjacent northern Georgia (map, Shelley, 1981, fig. 132).

Mimetica Group

Falloria crassicurvosa (Shelley)

Sigmoria (Falloria) crassicurvosa Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 138, figs. 115-120. ♂ HT (USNM) from a site along TN Hy. 25, two miles west of Carthage, Smith Co., Tennessee.

Range: Three localities on the eastern edge of the Nashville Basin, in DeKalb and Smith cos., Tennessee (map, Shelley, 1986, fig. 126).

Falloria mimetica (Chamberlin)

Fontaria mimetica Chamberlin, 1918, Psyche, 25: 29. ♂ HT (?MCZ) from "Glendale Hills", south of Nashville, Davidson Co., Tennessee.

Sigmoria mimetica: Hoffman, 1950, American Mus. Nov., 1462: 6.

Sigmoria (Falloria) mimetica: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 133, figs. 109-114.

Range: Cumberland Plateau in central Tennessee north of the Duck River, possibly also in Kentucky (map, Shelley, 1986, fig. 126).

Shelley (1986: 135) noted that the locality Glendale Hills no longer exists by that name near Nashville, and suggested it may currently survive as Glendale Lane in the southern part of that city. The holotype, originally property of the MCZ, found its way to Salt Lake City when Prof. Chamberlin relocated there, and was separated out for return to MCZ when his collection was acquired by the USNM and curated by me in the 1970s.

Falloria pendula (Shelley)

Sigmoria (Falloria) pendula Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 142, figs. 121-124. ♂ HT (USNM) from Edgar Evins State Park, DeKalb Co., Tennessee.

Range: Eastern Highland Rim in DeKalb and Putnam cos., Tennessee (map, Shelley, 1986, fig. 126).

Picapa Group

Falloria picapa (Keeton)

Hubroria picapa Keeton, 1960, Bull Brooklyn Entom. Soc.. 55: 2, figs. 1-4. ♂ PT (FMNH) from Sunbright, Morgan Co., Tennessee.

Sigmoria (Falloria) picapa: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 130, figs. 105-108.

Range: Cumberland Plateau in Morgan Co., Tennessee.

Translineata Group

Falloria abbreviata Shelley

Sigmoria (Falloria) abbreviata Shelley, 1986, Mem. American Entom. Soc., 35: 123, figs. 97-100. ♂ HT (USNM) from Fall Creek Falls State Park, Van Buren Co., Tennessee.

Range: Van Buren and Bledsoe counties, central Tennessee (map, Shelley 1986, fig. 126).

Falloria ainsliei (Chamberlin)

Apheloria ainsliei Chamberlin, 1921, Canadian Entom., 53: 232, fig. 1. ♂ HT (MCZ) from an unspecified locality in Knox County, Tennessee.

Sigmoria (Falloria) ainsliei: Shelley, 1986, Mem. American Entom. Soc., 35: 117, figs. 88-91.

Range: Tennessee River valley in Knox, Sevier, and Blount cos., Tennessee (map, Shelley, 1986, fig. 125)

Falloria forficata Shelley

Sigmoria (Falloria) forficata Shelley, 1986, Mem. American Entom. Soc., 35: 119, figs. 92-96. ♂ HT (USNM) from a site along Fall Creek, 4,2 miles southeast Crab Orchard, Cumberland Co., Tennessee.

Range: A linear extent along the eastern escarpment of the Cumberland Plateau, in Scott, Morgan, Cumberland, Bledsoe, and Hamilton cos., Tennessee (map, Shelley 1986, fig. 126).

Falloria fumimontis (Shelley)

Sigmoria fumimontis Shelley, 1981, Mem. American Entom. Soc., 33: 79, figs. 74-77. ♂ HT (USNM) from Abram"s Creek Campground, 10.5 miles south of Maryville, Blount Co., Tennessee.

Sigmoria (Falloria) fumimontis Shelley, 1986, in Shelley & Whitehead, 1986, Mem. American Entom. Soc., 35: 115.

Range: Great Smoky Mountains in Blount Co., Tennessee (map, Shelley, 1981, fig. 133).

Falloria houstoni (Chamberlin)

Sigmoria houstoni Chamberlin, 1943, Proc. Biol>Soc. Washington, 56: 144, fig. 1. ♂ HT (USNM) stated to be from Houston, Texas, but clearly in error as the species is endemic to the Cumberland Plateau in eastern Tennessee.

Sigmoria (Falloria) houstoni: Shelley, 1986, in Shelley & Whiutehead, Mem. American Entom. Soc., 35: 126, figs. 101-104.

Range: eastern edge of the Cumberland Plateau in southeastern Tennessee (map, Shelley, 1981, fig. 126).

Falloria lyrea (Shelley)

Sigmoria (Falloria) lyrea Shelley, 1981, Mem. American Entom. Soc., 33: 76, figs. 70-73. ♂ HT (USNM) from a site along Parsons Bridge Rd., 0.1 mile north of jct with US Hy. 129, 8.5 miles southeast of Tallahassee, Blount Co., Tennessee.

Sigmoria (Falloria) lyrea: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 115.

Range: Great Smoky Mountains in Blount and Sevier cos., Tennessee (map, Shelley, 1981, fig. 133).

Falloria translineata (Shelley)

Sigmoria translineata Shelley, 1981, Mem. American Entom. Soc., 33: 73, figs. 66-69. ♂ HT (USNM) from a site along Rich Mountain Gap Rd., 5.6 miles southwest of Townsend, Blount Co., Tennessee.

Sigmoria (Falloria) translineata: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 115.

Range: Great Smoky Mountains in Blount and Sevier cos., Tennessee (map, Shelley, 1981, fig. 132, 133).

Tuberosa Group

Falloria tuberosa (Shelley)

Sigmoria tuberosa Shelley, 1981, Mem. American Entom. Soc., 33: 93, figs. 90-93. ♂ HT (USNM) from Smokemont Campground, seven miles north of Cherokee, Swain Co., North Carolina.

Sigmoria (Falloria) tuberosa: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 111.

Range: Apparently restricted to vicinity of the type locality (map, Shelley, 1981, fig. 132).

The very disjunct gonopod structure in this species would appear to merit generic-level status.

Genus **Furcillaria** Shelley

Furcillaria Shelley, 1981, Proc. Biol. Soc. Washington, 94: 953. Type species: *F. aequalis* Shelley, by original designation.

Four species, Piedmont region of South Carolina and adjacent Blue Ridge in North Carolina (map, Shelley, 1981, fig. 17).

Through the gonopodal similarity of the species *F. aequalis* and *P. thrinax* the genera *Furcillaria* and *Prionogonus* might be regarded as adelphotaxa, against the opinion of Shelley (1982: 473) who has also remarked the situation. Transfer of *thrinax* into *Furcillaria* produces a somewhat more homogeneous *Prionogonus,* it is also the species in which the lateral telopodital dentations are least developed.

Furcillaria aequalis Shelley

Furcillaria aequalis Shelley, 1981, Proc. Biol. Soc. Washington, 94: 956, figs. 1-5. ♂ HT (USNM) from a site along SC Hy. 283, 11.3 miles northwest of Edgefield, Edgefield Co., South Carolina.

Range: Piedmont region of central western South Carolina, in Edgefield and Saluda cos.

Furcillaria convoluta Shelley

Furcillaria convoluta Shelley, 1981, Proc. Biol. Soc. Washington, 94: 959, figs. 6-10. ♂ HT (USNM) from SC Hy.32 at Indian Creek, 9.4 miles northwest of Newberry, Newberry Co., South Carolina.

Range: Piedmont region of central South Carolina: Spartanburg, Union, Laurens, and Newberry cos.

Furcillaria laminata Shelley

Furcillaria laminata Shelley, 1981, Proc. Biol. Soc. Washington, 94: 961, figs. 11-16. ♂ HT (USNM) from SC Hy. 192 at George's Creek, 8.5 miles east of Pickens, Pickens Co., South Carolina.

Range: Western South Carolina, Pickens and Anderson cos.

Furcillaria thrinax (Shelley), new combination!

Prionogonus thrinax Shelley, 1982, Proc. Biol. Soc. Washington, 95: 471, figs. 9-12. ♂ HT (USNM) from 3.1 miles northeast of Flat Rock, Cty. Rd. 1802, Henderson Co., North Carolina.

Genus **Lyrranea** Hoffman

Lyrranea Hoffman, 1963, Proc. Biol. Soc. Washington, 76: 114. Type species: *L. persica* Hoffman, by original designation. Synonymized with *Sigmoria* subgenus *Cheiropus* by Shelley, 1986

One species, Georgia.

Lyrranea persica Hoffman

Lyrranea persica Hoffman, 1963, Proc. Biol. Soc. Washington, 76: 115, figs. 1-4. ♂ HT (USNM) from a wooded hillside three miles west of Fort Valley, Peach Co., Georgia.

Cheiropus persicus: Shelley, 1984, Proc. Biol. Soc. Washington, 97: 271.

Sigmoria (Cheiropus) persica: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 101.

Range: A limited area in central western Georgia: Peach, Houston, Crawford, and Taylor counties.

Genus **Prionogonus** Shelley

Prionogonus Shelley, 1982, Proc. Biol. Soc. Washington, 95: 460. Type species: *P. haerens* Shelley, by original designation. Synonymized with *Sigmoria* subgenus *Cheiropus* by Shelley, 1986.

Four species, western North Carolina (map, Shelley, 1982, fig. 14).

Removed from genus: *P. thrinax* Shelley, 1982, see *Furcillaria.*

Prionogonus divaricatus Shelley

Prionogonus divaricatus Shelley, 1982, Proc. Biol. Soc. Washington, 95: 467, figs. 5-8. ♂ HT (USNM) from 4.8 miles northwest of Mill Spring on Cty. Rt. 1138, Polk Co., North Carolina.

Sigmoria (Cheiropus) divaricata: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 101.

Range: Blue Ridge in western North Carolina: Rutherford, Henderson, and Polk cos.

Prionogonus divergens (Chamberlin), new combination!

Sigmoria divergens Chamberlin, 1939, Bull. Univ. Utah, 30(2): 8, figs. 19-21. ♂ HT (USNM) from Saluda, Polk Co., North Carolina.

Sigmoria nigrescens Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., 66: 28, figs. 28-32. ♂ HT (USNM) from Sassafras Mountain, US Hy. 178, one mile west of jct with SC Hy. 288, Pickens Co., South Carolina. Synonymized by Shelley, 1983.

Cleptoria divergens divergens: Hoffman, 1967, Proc. U. S. Nat. Mus., 124: 21, figs. 17-19.

Sigmoria divergens: Shelley, 1983, Myriapodologica, 1: 83, figs. 1-5.

Range: The Blue Ridge front along the border shared by North and South Carolina (map, Shelley, 1983, fig. 5).

Already Shelley (1983: 89, 1986: 100) noted a close relationship between *stibarophalla* and *divergens*.

Prionogonus haerens Shelley

Prionogonus haerens Shelley, 1982, Proc. Biol. Soc. Washington, 95: 463, figs. 1-4. ♂ HT (USNM) from site along US Hy. 74, 0.4 miles west of the Henderson Co. line, in Buncombe Co., North Carolina.

Sigmoria (Cheiropus) haerens: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 101.

Range: Blue Ridge in western North Carolina: Buncombe, McDowell, and Henderson cos.

Prionogonus stibarophallus (Shelley), new combination!

Sigmoria stibarophalla Shelley, 1981, Mem. American Entom. Soc., 33: 41, figs. 23-28, 132-133. ♂ HT (USNM) from a site along NC Hy. 9, 7.2 miles east-southeast of Fairview, Buncombe Co., North Carolina.

Range: Blue Ridge in western North Carolina, Buncombe, McDowell, and Rutherford cos.

Genus **Rudiloria** Causey

Rudiloria Causey, 1955, Proc. Biol. Soc. Washington, 68: 28. Type species: *R. mohicana* Causey, by original designation. – Hoffman, 1978, Myriapodologica, 1: 6.

Sigmoria (Rudiloria): Shelley, 1986, Mem. American Entom. Soc., 35: 25 (revision).

Five species, one of them with two subspecies, northeastern United States.

My perception of this group as it occurs in Virginia differs somewhat from that of Dr. Shelley (1986: 30-35) and the situation invites further detailed investigation.

Rudiloria guyandotta (Shear)

Apheloria guyandotta Shear, 1972, Proc. Biol. Soc. Washington, 85: 494, figs. 1, 2. ♂ HT (MCZ) from Shaft Hollow, near McGraws, Wyoming Co., West Virginia

Rudiloria guyandotta: Hoffman, 1972, Myriapodologica, 1: 6.

Sigmoria (Rudiloria) guyandotta: Shelley, 1986, Mem. American Entom. Soc., 35: 35, figs. 8-9.

Range: In addition to the type locality, recorded from Menifee and Rowan cos., Kentucky.

Rudiloria kleinpeteri (Hoffman)

Apheloria kleinpeteri Hoffman, 1949, Proc. U. S. Nat. Mus., 99: 375, figs. 3, 4. ♂ HT (USNM) from Beartown Mountain at Burkes Garden, Tazewell Co., Virginia.

Rudiloria kleinpeteri: Hoffman, 1978, Myriapodologica, 1: 6.

Sigmoria (Rudiloria) trimaculata kleinpeteri: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 34, figs. 4-7.

Range: Ridge and Valley province of western Virginia, from the New River southwest nearly to the Tennessee state line.

Rudiloria mohicana Causey

Rudiloria mohincana [*sic!*] Causey, 1955, Proc. Biol. Soc. Washington, 68: 28, fig. 6. ♂ HT (AMNH) from Mohican State Park, Ashland Co., Ohio.

Rudiloria mohicana: Hoffman, 1978, Myriapodologica, 1: 6, fig. 4.

Sigmoria (Rudiloria) mohicana: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 38, figs. 10-12.

Range: Definitely known only from the type locality, but doubtless widespread in southern Ohio.

Rudiloria rigida Shelley

Rudiloria rigida Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 41, figs. 13-16. ♂ HT (VMNH) from bluffs along the Elk River, 1.0-1.5 miles south of Clay, Clay Co., West Virginia.

Range: Clay, Kanawha, and Nicholas cos., in central West Virginia (map, Shelley, 1986, fig. 17).

Rudiloria trimaculata tortua (Chamberlin)

Apheloria tortua Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 101, fig. 23 (March). ♂ HT (USNM) from Mountain Lake, Giles Co., Virginia.

Apheloria picta Hoffman, 1949, Proc. U. S. Nat. Mus., 99: 376, figs. 5, 6 (June). ♂ HT (USNM) from Mountain Lake, Giles Co., Virginia. Synonymized with *tortua* by Hoffman, 1951, with nominate *trimaculata* by Shelley, 1986.

Range: Central western Virginia (Giles, Craig, Bedford cos.), usually above 3000 ft.

This geographic population was considered as intergradient between nominate *trimaculata* and *kleinpeteri* by Shelley (1986:30). My own experience with these organisms suggests the arrangement proposed here, which I hope to document more fully at some future time.

Rudiloria trimaculata trimaculata (Wood)

Polydesmus (Fontaria) trimaculatus Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 6. Type material not known to exist, from Sesquehanna Co., Pennsylvania; 1865, Trans. American Philos. Soc., 13: 223, figs. 53, 54.

Apheloria trimaculata: Attems, 1938, Das Tierreich, 69: 170.

Fontaria lutzi Jacot, 1938, American Midl. Nat., 20: 571, fig. 1. Location of type material uncertain (PMNH?) from Keene, Cheshire Co., New Hampshire. Synonymized by Hoffman, 1951.

Apheloria keuka Chamberlin, 1939, Bull. Univ. Utah, 30(2): 10, fig. 32. ♂ HT (USNM) from Ithaca, Tompkins Co., New York. Synonymized by Shelley, 1986.

Apheloria antrostromicola Hoffman, 1949, Proc. U. S. Nat. Mus., 99: 372, figs. 1, 2. ♂ HT (USNM) from Stull's Cave, about nine miles southwest of Lowmoor, Alleghany Co., Virginia. Synonymized with nominate *trimaculata* by Shelley, 1986.

Apheloria trimaculata trimaculata: Hoffman, 1951, Chicago Acad. Sci. Nat. Hist. Misc., 81: 2.

Apheloria trimaculata incarnata: Hoffman, 1951, Chicago Acad. Sci. Nat. Hist. Misc., 81: 4, fig. 1a. ♂ HT (USNM) from Gull Lake, near Arden, Frontenac Co., Ontario. Synonymized by Shelley, 1986.

Rudiloria trimaculata: Hoffman, 1978, Myriapodologica, 1: 5, figs. 2, 5.

Sigmoria (Rudiloria) trimaculata trimaculata: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 31, figs. 1-3.

Range: Central and northern Appalachians, from the James River in Virginia north to Maine and Ontario (probably also adjacent Quebec) (map, Shelley, 1986, fig. 17).

I concur with Shelley's view that my *Apheloria antrostomicola* is not nameworthy, it was based on a single small sample and in my view represents a population intermediate between nominate *trimaculata* and *tortua.*

Genus **Sigmoria** Chamberlin

Sigmoria Chamberlin, 1939, Bull. Univ. Utah, 30(2): 7. Type species: *S. munda* Chamberlin, by original designation. – Shelley, 1981, Mem. American Entom. Soc., 33: 16 et seq. (revision).

Sigiria Chamberlin, 1939, Bull. Univ. Utah, 30(2): 9. Type species: *S. scorpio* Chamberlin, by original designation. Synonymized by Hoffman, 1980.

15 species, southeastern United States, West Virginia to South Carolina, most species in the Blue Ridge physiographic province.

I adopt here a somewhat more stringent concept of this genus than that proposed by Dr. Shelley in his 1986 revision. Consistency with his placement of such diverse taxa as *Stelgipus* and *Lyrranea* in *Sigmoria* would mandate inclusion of the much-less divergent (and older) genus *Apheloria* which would then assume both the group name and an internal diversity of awesome magnitude. Despite the insights that characterize Shelley's magisterial monograph, I believe that resolution of the Aphelorini remains an aspiration for the future (if ever!).

Australis Group

Sigmoria australis Shelley

Sigmoria (Cheiropus) australis Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 95, figs. 69-72. ♂ HT (USNM) from Torreya State Park, Liberty Co., Florida.

Range: One area in southeastern South Carolina and adjacent Georgia, another in southern Alabama and adjacent parts of Georgia and Florida (map, Shelley, 1986, fig. 68).

Shelley (1986: 100) postulated a relationship of this species with *Prionogonus stibarophallus*; my perception of the gonopodal similarities favors random homoplasy.

Latior Group

Sigmoria areolata Shelley

Sigmoria areolata Shelley, 1981, Mem. American Entom. Soc., 33: 38, figs. 19-22, 132,133. ♂ HT (USNM) from a site along cty. road 3119, seven miles southeast of Asheville, Buncombe Co., North Carolina.

Range: Localized in the southeastern part of Buncombe Co., North Carolina.

Sigmoria laticurvosa Shelley

Sigmoria laticurvosa Shelley, 1981, Mem. American Entom. Soc., 33: 59, figs. 49-54. ♂ HT (USNM) from McTier Creek on S.C. Hy. 25, 16 miles northeast of Aiken, Aiken Co., South Carolina.

Range: Known from several localities in Aiken Co., South Carolina.

In my view, the gonopod of this species suggests a derivative relationship from an ancestral stock similar to *S. stenoloba,* hence membership in the Latior Group.

Sigmoria latior hoffmani Shelley

Sigmoria latior hoffmani Shelley, 1976, Proc. Biol. Soc. Washington, 89: 29, fig. 5. ♂ HT (VMNH) from 4.4 miles morthwest of North, Orangeburg Co., South Carolina; 1981, Mem. American Entom. Soc., 33: 30, fig. 9.

Range: Coastal Plain of South Carolina between the Savannah and Congaree rivers (map, Shelley, 1981, figs. 137, 139.

Sigmoria latior latior (Brolemann)

Fontaria latior Brolemann, 1900, Mem. Soc. Zool. France, 13: 123, pl. 6, figs. 37-42. ♂ HT (MHNP) from an unspecified locality in North Carolina.

Sigmoria latior: Hoffman, 1950, American Mus. Nov., 1462: 5.

Sigmoria aberrans Chamberlin, 1939, Bull. Univ. Utah, 30(2): 8, figs. 24, 25. ♂ HT (USNM) from Linville Falls, Avery Co., North Carolina. Synomized by Shelley, 1976.

Sigmoria conclusa Chamberlin, 1939, Bull. Univ. Utah, 30(2): 8, figs. 22, 23. ♂ HT (USNM) from Altapass, Mitchell Co., North Carolina. Synonymized by Shelley, 1976.

Sigmoria furcifera Hoffman, 1949, Proc. U. S. Nat. Mus., 99: 387, figs. 17, 18. ♂ HT (USNM) from a site near Pineville, Wyoming Co., West Virginia. Synonymized by Shelley, 1976.

Sigmoria latior latior: Shelley, 1976, Proc. Biol. Soc. Washington, 89: 21, figs. 3, 6-14; 1981, Mem. American Entom. Soc., 33: 24, figs. 1-7, 132-133, 139.

Range: Extreme southern West Virginia, south and east across the Blue Ridge and Piedmont of North Carolina as far as the vicinity of Raleigh (map, Shelley, 1981, fig. 139).

Sigmoria latior munda Chamberlin

Sigmoria munda Chamberlin, 1939, Bull. Univ. Utah, 30(2): 8, figs. 15, 16. ♂ HT (USNM) from Hot Springs, Madison Co., North Carolina.

Sigmoria mariona Chamberlin, 1939, Bull. Univ. Utah, 30(2): 9, figs. 17, 18. ♂ HT (USNM) from Marion, McDowell Co., North Carolina. Synonymized by Shelley, 1981.

Sigmoria latior mariona: Shelley, 1976, Proc. Biol. Soc. Washington, 89: 28, fig. 4.

Sigmoria latior munda: Shelley, 1981, Mem. American Entom. Soc. 33: 28, figs. 8, 132-133, 139.

Range: Southern Blue Ridge in western North Carolina (Madison to Macon cos.), south and east into the western Piedmont (Spartanburg and Cherokee cos.) of South Carolina (map, Shelley, 1981, fig. 139).

Sigmoria quadrata Shelley

Sigmoria quadrata Shelley, 1981, Mem. American Entom. Soc., 33: 57, figs. 43-48. ♂ HT (USNM) from a site beside S.C. Hy. 604, four miles southwest of Lexington, Lexington Co., South Carolina.

Range: eastern Piedmont region of South Carolina, Saluda, Edgefield, and Lexington cos. (Map, Shelley, 1981, fig. 137).

Sigmoria stenoloba Shelley

Sigmoria stenoloba Shelley, 1981, Mem. American Entom. Soc., 33: 33, figs. 10-18, 132-133. ♂ HT (USNM) from a site at jct NC rts. 268 and 2083, 7.8 miles north-northeast of North Wilkesboro, Wilkes Co., North Carolina.

Range: Two apparently disjunct populations in Wilkes and Catawba cos., North Carolina (map, Shelley, 1981, fig. 132.

Nantahalae Group

Sigmoria nantahalae Hoffman

Sigmoria nantahalae Hoffman, 1958, Proc. Entom. Soc. Washington, 60: 281, figs. 1-4. ♂ HT (USNM) from a site along US Hy. 19, about three miles northeast of Nantahala, Swain Co., North Carolina. – Shelley, 1981, Mem. American Entom. Soc., 33: 67, figs. 61-65, 132-33.

Sigmoria (Falloria) nantahalae: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 106.

Range: Western North Carolina and adjacent northern Georgia, in and around the Nantahala Mountains (maps, Shelley, 1981, fig. 132, 133).

Stenogon Group

Sigmoria stenogon Chamberlin

Sigmoria stenogon Chamberlin, 1942, Bull. Univ. Utah, 32(8): 5, fig. 12. ♂ HT (USNM) from "Bennett Gap Road", North Carolina. – Shelley, 1981, Mem. American Entom. Soc., 33: 63, figs. 55-60.

Range: South and east of Pisgah Ridge in Transylvania and Henderson cos., North Carolina (map, Shelley, 1981, fig. 132.

Shelley (1981: 63) suggested that the type material was probably collected along the road (now U.S. Hy. 276) to Wagon Road Gap rather than Bennett Gap, as labeled.

Disjuncta Group

Sigmoria disjuncta Shelley

Sigmoria disjuncta Shelley, 1981, Mem. American Entom. Soc., 33: 121, figs. 128-130. ♂ HT (USNM) from a site along S.C. Hy. 28, 2.3 miles northhwest of Mountain Rest, Oconee Co., South Carolina.

Range: Aside from the type locality, recorded from Dawson, Hall, and Stephens cos.in northern Georgia (map, Shelley, 1981, figs. 137, 138).

Rubromarginata Group

Sigmoria austrimontis Shelley

Sigmoria rubromarginata austrimontis Shelley, 1981, Mem. American Entom. Soc., 33: 102, figs. 102,103. ♂ HT (USNM) from a site on NC Rt. 1900, 9.2 miles south of Valdese, Burke Co., North Carolina.

Sigmoria austrimontis: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 102.

Range: South Mountains in Burke, Cleveland, and Rutherford cos., North Carolina (map, Shelley, 1981, fig. 134).

Sigmoria nigrimontis angulosa Shelley

Sigmoria nigrimontis angulosa Shelley, 1981, Mem. American Entom. Soc., 33: 118, figs. 122-124.♂ HT (USNM) from a site along NC Rt. 197, 6.8 miles southwest of Burnsville, Yancey Co., North Carolina.

Range: North and west of the Black Mountains, in southern Yancey and extreme northern Buncombe cos., North Carolina (maps, Shelley, 1981, figs. 133, 134).

Sigmoria nigrimontis intermedia (Hoffman)

Apheloria intermedia Hoffman, 1948, Journ. Washington Acad. Sci., 38: 346, figs. 1, 2. ♂ HT (USNM) from Asheville, Buncombe Co., North Carolina.

Sigiria intermedia: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 48.

Sigmoria nigrimontis intermedia: Shelley, 1981, Mem. American Entom. Soc., 33: 113, figs.113-121.

Range: South and west of the Black Mountains, in Buncombe, Madison, and Yancey cos., North Carolina, and adjacent Greene and Unicoi cos., Tennessee (maps, Shelley, 1981, figs. 134, 135). Shelley perceived this taxon as "capriciously variable" in gonopod structure and illustrated several of the variant forms of that appendage.

Sigmoria nigrimontis nigrimontis (Chamberlin)

Deltotaria nigrimontis Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 28, figs. 11, 12. ♂ HT (apparently lost), ♂♀ PT (USNM) and ♂ PT (AMNH) from Black Mountain [perhaps Black Mountains intended], Buncombe Co., North Carolina.

Sigiria nigrimontis: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 48.

Sigmoria nigrimontis nigrimontis: Shelley, 1981, Mem. American Entom. Soc., 33: 109, figs. 107-112.

Range: The Black Mountains in Buncombe, McDowell, and Yancey cos., North Carolina.

Sigmoria nigrimontis unicoi Shelley

Sigmoria nigrimontis unicoi Shelley, 1981, Mem. American Entom. Soc., 33: 119, figs. 125-127. ♂ HT (USNM) from 6.8 miles south of Erwin, Unicoi Co., Tennessee, on Hy. 81..

Range: Two localities in Unicoi Co., Tennessee (map, Shelley, 1981, figs. 134, 135).

Sigmoria rubromarginata (Bollman)

Fontaria rubromarginata Bollman, 1888, Proc. U. S. Nat. Mus., 10: 622. ♂ HT (USNM) from Balsam, Jackson Co., North Carolina.

Sigiria scorpio Chamberlin, 1939, Bull. Univ. Utah, 30(2): 9, figs. 26, 27. ♂ HT (USNM) from a site between Hot Springs and Paint Rock, Madison Co., North Carolina. Synonymized by Hoffman, 1950.

Sigmoria zyga Chamberlin, 1949, Proc. Biol. Soc. Washington, 62: 3, fig. 2. ♂ HT(USNM) from a site between Hot Springs and Paint Rock, Madison Co., North Carolina. Synonymized by Shelley, 1981.

Sigiria rubromarginata: Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., 66: 25.

Sigmoria rubromarginata rubromarginata: Shelley, 1981, Mem. Entom. Soc. America, 33: 98, figs. 94-99.

Sigmoria rubromarginata:Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 102.

Range: Western North Carolina, from the Blue Ridge crest in Buncombe Co. west to the Great Smoky Mountains, Tennessee, south of the French Broad River (maps, Shelley, figs. 133, 134).

Sigmoria simplex Shelley

Sigmoria simplex Shelley, 1981, Mem. American Entom. Soc., 33: 45, figs. 29-34. ♂ (USNM) from a site along cty. road 1002, 6.8 miles southwest of Spruce Pine, Mitchell Co., North Carolina.

Sigmoria inornata Shelley, 1985, in Shelley & Whitehead, Mem. American Entom. Soc., 85: 105. New name for *S. simplex,* to remove homonymy reslting from transfer of *Croatania simplex* Shelley, 1977, into *Sigmoria*. My recognition of *Croatania* as a different genus restores *simplex* as a valid name in *Sigmoria* for the present.

Range: Localized in a small area in the Blue Ridge of McDowell, Yancey, and Mitchell cos., North Carolina.

Shelley referred this species to a separate group within the genus, but the similarity in gonopod structure to that seen in *S. n. intermedia* would seem to suggest a fairly close affinity. His figures 31-34 (1981) demonstrate an astonishing variability within a small geographic range.

Sigmoria triangulata Shelley

Sigmoria triangulata Shelley, 1981, Mem. American Entom. Soc., 33: 104, figs. 104-106. ♂ HT (USNM) from a site 0.9 miles north of Hot Springs on US Hys. 25-70, Madison Co., North Carolina.

Range: A small area just north of the French Broad River in Madison Co., North Carolina, and Greene and Cocke cos., Tennessee (maps, Shelley, 1981, figs. 133, 134).

Sigmoria whiteheadi Shelley

Sigmoria whiteheadi Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 102, figs. 73-76. ♂ HT (USNM) from a site along Laurel Creek at mile 174.3, Blue Ridge Parkway, Patrick Co., Virginia.

Range: Despite considerable search in the vicinity and elsewhere, this species is still known only from its type locality.

Genus **Stelgipus** Loomis

Stelgipus Loomis, 1944, Psyche, 51: 173. Type species: *S. agrestis* Loomis, by original designation. Synonymized with *Sigmoria* subgenus *Cheiropus* by Shelley, 1986.

Two species, Florida, Georgia..

Stelgipus agrestis Loomis

Stelgipus agrestis Loomis, 1944, Psyche, 51: 173, fig. 5. ♂ HT (MCZ) from Waynesboro, Burke Co., Georgia.

Cheiropus agrestis: Shelley, 1984, Proc. Biol. Soc. Washington, 97: 273, figs. 12-16.

Sigmoria (Cheiropus) agrestis: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 101.

Range: Central-eastern Georgia (Clarke and Burke cos.) and coastal South Carolina (Wadlamaw Island). Confirmation of the last record is desireable (map, Shelley, 1984, fig. 23).

Stelgipus serratus (Shelley), new combination!

Cheiropus serratus Shelley, 1984, Proc. Biol. Soc. Washington, 97: 276, figs. 17-22. ♂ HT (USNM) from Crooked River State Park, Camden Co., Georgia.

Sigmoria (Cheiropus) serratus: Shelley, 1986, in Shelley & Whitehead, Mem. American Entom. Soc., 35: 101.

Range: Coastal region of southeastern Georgia and extreme northeastern Florida (map, Shelley, 1984, fig. 23).

Tribe Rhysodesmini Brolemann

Rhysodesmini Brolemann, 1916, Ann. Soc. Entom. France, 84: 553. – Hoffman, 1960, Proc. U. S. Nat. Mus. 112: 260; 1980, Classification of the Diplopoda, p. 158..

Genus **Boraria** Chamberlin

Boraria Chamberlin, 1943, Proc. Biol. Soc. Washington, 56: 143. Type species: *Aporiaria carolina* Chamberlin, 1939, by original designation. – Hoffman, 1965, Proc. U. S. Nat. Mus., 117: 315(revision). – Hoffman & Shear, 1969, Radford Review, 23: 93 (nomenclatorial alterations).

Howellaria Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., 66: 26. Type species: *H. deturkiana* Causey, 1942, by original designation. Synonymized by Hoffman, 1965.

Four species, southern Appalachian region, Arkansas.

Boraria deturkiana (Causey)

Aporiaria deturkiana Causey, 1942, Ent. News, 53: 169, fig. 8. ♂ HT (ANSP) from Highlands, Macon Co., North Carolina.

Howellaria deturkiana: Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., 66: 26, figs. 7, 8, 13.

Boraria deturkiana: Hoffman, 1965, Proc. U. S. Nat. Mus., 117: 333, figs. 14-19.

Range: Southern Appalachian region in North Carolina and Tennessee (map, Hoffman, 1965, fig. 19).

Boraria infesta (Chamberlin)

Nannaria infesta Chamberlin, 1918, Psyche, 25: 126. ♂ HT (MCZ) from Cranberry, Avery Co., North Carolina.

Aporiaria geniculata Chamberlin, 1939, Bull. Univ. Utah, 30(2): 6, fig. 11. ♂ HT (USNM) from Soco Falls, northeast of Cherokee, Jackson Co., North Carolina. Synonymized by Hoffman & Shear, 1969.

?*Aporiaria brunnior* Chamberlin, 1943, Proc. Biol. Soc. Washington, 56: 37, fig. 10. ♂ HT (FMNH) from Great Smoky Mountains National Park, Sevier Co., Tennessee.

Boraria media (nec *media* Chamberlin, 1918!): Hoffman, 1965, Proc. U. S. Nat. Mus., 117: 326, figs. 8-11.

Boraria infesta: Hoffman & Shear, 1969, Radford Review, 23: 95.

Range: Southern Appalachian region, from Mount Rogers, Virginia, south to the Balsam Mountains, North Carolina, and Great Smokies, Tennessee (map, Hoffman, 1965, fig. 13).

Boraria profuga (Causey)

Cibularia profuga Causey, 1955, Proc. Biol. Soc. Washington, 68: 29, fig. 7. ♂ HT (AMNH) from Mount Ida, Montgomery Co., Arkansas.

Boraria profuga: Hoffman & Shear, 1969, Radford Review, 23: 95, figs. 1-3.

Range: Known only from the type locality, perhaps endemic to the Ouachita Mountains, Arkansas.

Boraria stricta (Brolemann)

Fontaria tennesseensis var. *stricta* Brolemann, 1896, Ann. Soc. Entom. France, 65: 63, figs. 17, 18. ST (MNHP) from "North Carolina" without further locality.

Nannaria media Chamberlin, 1918, Psyche, 25: 125. ♂ HT (MCZ) from Burbank, Carter Co., Tennessee. Synonymized by Hoffman & Shear, 1969.

Rhysodesmus strictus: Attems, 1938, Das Tierreich, 69: 144, fig. 167.

Aporiaria carolina Chamberlin, 1939, Bull. Univ. Utah, 30(2): 6, fig. 10. ♂ HT (USNM) from Soco Falls, northeast of Cherokee, Jackson Co., North Carolina. Synonymized by Hoffman, 1965.

Aporiaria fumans Chamberlin, 1943, Proc. Biol. Soc. Washington, 56: 37, fig. 9. ♂ HT (FMNH) from Greenbrier Cove, Sevier Co., Tennessee. Synonymized by Hoffman, 1965.

Boraria stricta: Hoffman, 1965, Proc. U. S. Nat. Mus. 117: 317, figs. 1-7.

Range: Southern Appalachians, from Floyd Co., Virginia, south to Dawson Co., Georgia; also disjunct in the Kings Mountain region of North Carolina (Filka & Shelley, 1980) (map, Hoffman, 1965, fig. 7).

Genus **Erdelyia** Hoffman

Erdelyia Hoffman, 1962, Proc. Biol. Soc. Washington, 75: 181. Type species: *E. saucra* Hoffman, by original designation.

One species, Southern Appalachians (Georgia).

Erdelyia saucra Hoffman

Erdelyia saucra Hoffman, 1962, Proc. Biol. Soc. Washington, 75: 184, figs. 1-6. ♂ HT (USNM) from woods along Ga. Hy. 180, 0.5 mile west of road to Brasstown Bald, Union Co., Georgia.

Range: Blue Ridge in northern Georgia (Townes, Union, White counties).

Genus **Cherokia** Chamberlin

Cherokia Chamberlin, 1949, Proc. Biol. Soc. Washington, 62: 3. Type species: *C. georgiana* Bollman, by original designation.– Hoffman, 1960, Proc. U. S. Nat. Mus. 112: 227 (revision).

One species, southeastern United States.

Cherokia georgiana georgiana (Bollman)

Fontaria georgiana Bollman, 1889, Proc. U. S. Nat. Mus., 11: 344. ♂ HT (USNM) frm Macon, Bibb Co., Georgia.

Fontaria tallulah Bollman, 1889, Proc. U. S. Nat. Mus. 11: 344. ♀ HT (USNM) from Tallulah Falls, Habersham Co., Georgia. Synonymized by Hoffman, 1950.

Mimuloria furcifer Chamberlin, 1940, Ent. News, 51: 282, fig. 1. ♂ HT (USNM) from Pisgah National Forest southwest of Asheville, Buncombe Co., North Carolina. Synonymized by Hoffman, 1960.

Mimuloria georgiana: Loomis, 1943, Bull. Mus. Comp. Zool., 92: 402.

Dynoria parvior Chamberlin, 1947, Proc. Biol. Soc. Washington, 60: 10, fig. 4. ♂ HT (USNM) from Neel Gap, Union Co., Georgia. Synonymized by Hoffman, 1960.

Cherokia georgiana: Chamberlin, 1949, Proc. Biol. Soc. Washington, 62: 3.

Cherokia georgiana georgiana: Hoffman, 1960, Proc. U. S. Nat. Mus., 112: 240, figs. 3d, 4e, 5a, 6, 7 (revision).

Range: Georgia, western South Carolina, southeastern Tennessee (map, Hoffman, 1960, fig. 7).

Cherokia georgiana ducilla

Mimuloria ducilla Chamberlin, 1939, Bull. Univ. Utah, 30(2): 7, fig. 12. ♂ HT (USNM) from Soco Falls, northeast of Cherokee, Jackson Co., North Carolina.

Cherokia georgiana ducilla: Hoffman, 1960, Proc. U. S. Nat. Mus., 112: 255, figs. 3b-e, 4f, 5b, 6, 7.

Range: Great Smoky and Balsam mountains, North Carolina -Tennessee (map, Hoffman, 1960, fig. 6).

Cherokia georgiana latassa Hoffman

Cherokia georgiana latassa Hoffman, 1960, Proc. U. S. Nat. Mus., 112: 257, figs. 3a,c, 4a-e, 5c,d, 7. ♂ HT (USNM) from bluff on Caney Fork River, one mile NE of Rock Island, Warren CO., Tennessee.

Range: Extreme southeastern Kentucky and adjacent Virginia south through central Tennessee to central Alabama (map, Hoffman, 1960, fig. 7).

Genus **Gyalosthethus** Hoffman

Gyalostethus Hoffman, 1965, Proc. U. S. Nat. Mus., 117: 338. Type species: *Boraria monticolens* Chamberlin, 1951.

One species, southern Appalachians , eastern United States.

Gyalostethus monticolens (Chamberlin)

Boraria monticolens Chamberlin, 1951, Great Basin Naturalist, 11: 26, fig. 16. ♂ HT (USNM) from an unspecified locality in the Great Smoky Mountains National Park, Sevier Co., Tennessee.

Gyalostethus monticolens: Hoffman, 1965, Proc. U. S. Nat. Mus., 117: 339, figs. 20-26.

Range: Southern Appalachian region from southwestern Virginia to north Georgia and Alabama (map, Hoffman, 1965, fig. 26).

Genus **Pleuroloma** Rafinesque

Pleuroloma Rafinesque, 1820, Annals of Nature, p. 8. Type species: *P. flavipes* Rafinesue, by monotypy. – Hoffman & Crabill, 1953, Florida Entom., 36: 79. – Shelley, 1980, Canadian Journ. Zool., 58: 129 et seq. (Revision).

Four species, eastern and central United States.

Pleuroloma cala (Chamberlin)

Zinaria cala Chamberlin, 1939, Bull. Univ. Utah, 30(2): 4, fig. 6. ♂ HT (USNM) from "east of Deer Park" [=Osceola or Brevard County], Florida.

Pleuroloma cala: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 45. – Shelley, 1980, Canadian Journ. Zool., 58: 151, figs. 3, 5, 9, 15, 19, 27, 29, 31.

Range: Florida peninsula, south of Clay and Levy counties (map, Shelley, 1980, fig. 31). The record for Screven Co., Georgia (Chamberlin, 1943) is based on a specimen of *P. plana*.

Pleuroloma flavipes Rafinesque

Pleuroloma flavipes Rafinesque, 1820, Annals of Nature, p. 8. – Hoffman & Crabill, 1953, Florida Entom., 36: 79. – Shelley, 1980, Canadian Journ. Zool., 58: 139, figs. 1, 6-7, 11-13, 17, 25, 29, 30.

Polydesmus (Fontaria) virginiensis: Wood, 1865, Trans. American Philos. Soc., 13: 221, fig. 49, pl. III, fig. 8. Apparently the origin of most of the numerous citations of the name virginiensis (non sensu Drury) in connection with species of this genus; extensive references are cited by Shelley, 1980: 139-140.

Fontaria virginiensis brunnea Bollman, 1887, American Natur., 21: 82. ♂ HT (USNM) from Fort Snelling, Hennepin Co., Minnesota. Synonymized by Shelley, 1980.

Fontaria butlerii McNeill, 1888, Bull. Brookville Soc. Nat. Hist., 3: 8. Type material not located, from Brookville, Franklin Co., Indiana. Synonymized by Shelley, 1980.

Fontaria virginiensis castanea Bollman, 1893, Bull. U. S. Nat. Mus., 46: 132 (*lapsus* for *brunnea*).

Zinaria urbana: Chamberlin, 1939, Bull. Univ. Utah, 30(2): 5, fig. 5. ♂ HT (USNM) from Urbana, Champaign Co., Illinois. Synonymized by Shelley, 1980.

Zinaria iowa Chamberlin, 1942, Canadian Entom., 74: 16, fig. 3. ♂ HT (USNM) from Ames, Story Co., Iowa. Synonymized by Shelley, 1980.

Zinaria mima Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 101, fig. 26. ♂ HT (USNM) from Greene Co., Pennsylvania, without further locality. Synonymized by Shelley, 1980.

Zinaria rubrilata Hoffman, 1949, Proc. Biol. Soc. Washington, 62: 84. ♂ HT (USNM) from roadside one mile north of Kilmarnock, Lancaster Co., Virginia. Synonymized by Shelley, 1980.

Zinaria warreni Causey, 1951, Proc. Arkansas Acad. Sci., 4: 83, figs. 1c, 3b, 6, 8c, 10. Type material (ANSP), from an island in King's River, near Berryville, Carroll Co., Arkansas. Synonymized by Shelley, 1980.

Zinaria busheyi Causey, 1951, Proc. Arkansas Acad. Sci., 4: 84, figs. 1f, 4, 7, 8j. Type material (ANSP) from Upland, Grant Co., Indiana. Synonymized by Shelley, 1980.

Zinaria miribilia Causey, 1951, Proc. Arkansas Acad. Sci., 4: 85, figs. 1d, 8f. Type material (ANSP, part (syntypes?) is in FSCA), from Ark. Hy. 62 on Crowley's Ridge, 12 miles NE of Piggott, Clay Co., Arkansas. Synonymized by Shelley, 1980.

Zinaria proxima Causey, 1951, Proc. Arkansas Acad. Sci., 4: 86, figs. 1g, 2a, 3c, 8e, 12. Type material (ANSP) from "Liberty and Zeeb Roads", five miles west of Ann Arbor, Washtenaw Co.,. Michigan.

Range: Much of central and central-eastern United States: Massachusetts west to North Dakota, south to Louisiana and North Carolina (map, Shelley, 1980, fig. 29).

The remarkable list of names considered referable to *flavipes* by Shelley is due in part to simple carelessness by previous workers, but to a considerable extent also to extensive variation in peripheral characters throughout a very wide distribution. *P. flavipes* as defined by Shelley may be regarded as a an aggressive and successful taxon in the expansion-phase of its phylogeny, in which numerous localized forms are evolving without having reached the level of genetic isolation. The genus is one admirably suited for analysis of genetic differentiation by use of molecular techniques.

Pleuroloma pinicola Shelley

Pleuroloma pinicola Shelley, 1980, Canadian Journ. Zool., 58: 148, figs. 2, 8, 14, 18, 26, 29, 30. ♂ HT (USNM, transferred from NCSM), from the Green Swamp, 8-9 miles south of Bolton, Columbus Co., North Carolina.

Range: Coastal Plain of South Carolina and southeastern North Carolina (map, Shelley, 1980, fig. 30).

Pleuroloma plana Shelley

Pleuroloma plana Shelley, 1980, Canadian Journ. Zool., 58: 154, figss. 4, 10, 16, 20-24, 28-31. ♂ HT (USNM, transferred from NCSM), from Wakulla Springs Resort, Wakulla Co., Florida.

Range:Western South Carolina, southwest across Georgia to western Florida (map, Shelley, 1980, fig. 29).

Genus **Rhysodesmus** Cook

Rhysodesmus Cook, 1895, Ann. New York Acad. Sci., 9: 5. Type species: *Polydesmus (Fontaria) limax* DeSaussure, 1860, by original designation. – Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 188. – Hoffman, 1970, Radford Review, 24: 143.

Dampfaria Verhoeff, 1932, Zool. Jahrb. Abt. Syst., 62: 519. Type species: *D. dampfi* Verhoeff, by monotypy. Synonymized by Hoffman, 1966.

Aporiaria Chamberlin, 1938, Proc. Biol. Soc. Washington, 51: 207. Type species: *A. texicolens* Chamberlin, by original designation. Synonymized by Chamberlin, 1943.

Acentronus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 50. Type species: *A. minor* Chamberlin, by original designation. Synonymized by Hoffman, 1966.

70 species, El Salvador and Guatemala, north through Mexico as far as southern and western Texas; one species, southern Appalachians (Virginia).

Rhysodesmus acolhuus (Humbert & DeSaussure)

Polydesmus (Fontaria) acolhuus Humbert & DeSaussure, 1869, Rev. & Mag. Zool. (2) 21: 150. Original locality "Mexico temperata." – DeSaussure & Humbert, 1872, in: Miss. Scient. Mex., Zool., (6) 2: 33, pl. II, figs. 2a-m., cited from "...la Cordillère orientale du Mexique, région moyenne; vallé de Moyoapan et Sierra de Agua, près Orizaba." Extant syntypes (MHNG) all labeled "Sta. Cruz, Mexique", lectotype designated by Hoffman, 1970.

Rhysodesmus acolhuus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 203. – Hoffman, 1970, Radford Review, 24: 158, fig. 8 (notes on lectotype).

Rhysodesmus alpuyecus Chamberlin

Rhysodesmus alpuyecus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 37, fig. 76, 77. ♂ HT (USNM) from Alpuyec, Morelos, Mexico.

Rhysodesmus angelus (Karsch)

Polydesmus (Fontaria) angelus Karsch, 1881, Archiv Naturg., 48: 39, fig. 13. ♂ HT (ZMB) from Puebla (presumably the city), Mexico.

Rhysodesmus angelus: Pocock, 1910, Biol. Centr.-Amer., Diplopoda, p. 203, pl. 15, fig. 14.

Rhysodesmus angustus Loomis

Rhysodesmus angustus Loomis, 1966, Ann.Entom. Soc. America, 59: 14, figs. 10-12. ♂ HT (SMUK) from 25 miles west of Ciudad Hidalgo, Michoacan, Mexico.

Rhysodesmus arcuatus Pocock

Rhysodesmus arcuatus Pocock, 1910, Biol. Centr.-Amer., Diplopoda, p. 201, pl. XV, figs. 13-13e. Location of type material unknown, from Omilteme, 8000 ft., Guerrero, Mexico.

Rhysodesmus attemsi Pocock

Rhysodesmus attemsi Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 200. Location of type material unknown, from Amula and Omilteme, Guerrero, Mexico.

Rhysodesmus bolivari Chamberlin

Rhysodesmus bolivari Chamberlin, 1943, Bull. Univ. Utah, 34(7): 38, fig. 78. ♂ HT (USNM) from García, Nuevo León, Mexico.

Rhysodesmus byersi Loomis

Rhysodesmus byersi Loomis, 1966, Ann. Entom. Soc. America, 57: 14, figs. 13, 14. ♂ HT (SMUK) from Hy. 85, ten miles northeast of Jacala, Hidalgo, Mexico.

Rhysodesmus championi Pocock

Rhysodesmus championi Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 198. Location of ♀ HT unknown, from Zapote [Departamento not located], Guatemala.

Rhysodesmus chisosi Shelley

Rhysodesmus chisosi Shelley, 1989, Southwestern Natur., 34: 221, figs. 2a-b. ♂ ST (USNM) from an unspecified locality in the Chisos Mountains, Brewster Co., Texas.

Rhysodesmus consobrinus (DeSaussure)

Polydesmus (Fontaria) consobrinus DeSaussure, 1859, Linnaea Entom., 13: 322. Location of type material unknown (not seen at MHNG by me), from "...toutes terres froides du Mexique, dans l'Anahuac, au pic d'Orizaba..."; Anahuac selected by Loomis (1968) as type locality, without examination of syntypes or lectotype designation.

Rhysodesmus consobrinus Pocock, 1910, Biol. Centr.-Amer., Diplopoda, p. 204.

Rhysodesmus constrictus Loomis

Rhysodesmus constrictus Loomis, 1966, Ann. Ent. Soc. America, 57: 16, figs. 15, 16. ♂ HT (SMUK) from four miles west of Pachuca, Hidalgo, Mexico.

Rhysodesmus coriaceus Loomis

Rhysodesmus coriaceus Loomis, 1968, Journ. Kansas Entom. Soc., 41: 386. ♂ HT (USNM) from Horsetail Falls, above Cercado, Nuevo León, Mexico.

Rhysodesmus cuernavacae Chamberlin

Rhysodesmus cuernavacae Chamberlin, 1942, Canadian Entom., 74: 92, fig. 00. ♂ HT (USNM) from Cuernavaca, Morelos, Mexico.

Rhysodesmus cumbres Chamberlin

Rhysodesmus cumbres Chamberlin, 1943, Bull. Univ. Utah, 34(7): 39, figs. 79, 80. ♂ HT (USNM) from Cumbres, Veracruz, Mexico.

Rhysodesmus dampfi (Verhoeff)

Dampfaria dampfi Verhoeff, 1932, Zool. Jahrb. Abt. Syst., 62: 519, figs. 48-50. ♂ HT (ZSM) from Desierto de los Leones, Distrito Federal, Mexico.

Rhysodesmus eutypus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 41, figs. 81, 82. ♂ HT (USNM) from Los Berros, 2500 m., Mexico, Mexico. Synonymized by Hoffman, 1970.

Rhysodesmus dampfi: Hoffman, 1966, Trans. American Entom. Soc., 92: 9; 1970, Radford Review, 24:147, figs. 1, 9.

Range: Central part of the Transverse Volcanic province, in Morelos, Mexico, and the Distrito Federal, Mexico.

Rhysodesmus dasypus (Gervais)

Polydesmus dasypus Gervais, 1847, in: Walckenaer & Gervais, Hist. Nat. Ins. Apt., 4: 115. ♂ HT (MHNP) without locality data.

Polydesmus (Fontaria) limax DeSaussure, 1859, Linnaea Entom., 13: 312. ♂ LT (MHNG) from San Andres Tuxtla, Veracruz, Mexico.

Rhysodesmus limax: Cook, 1895, Ann. New York Acad. Sci., 9: 5. – Pocock, 1910, Biol. Centr.-Amer., Diplopoda, p. 205, pl. 15, figs. 1, la. – Hoffman, 1966, Trans. American Entom. Soc., 92: 10, fig. 4. (lectotype selected).

Rhysodesmus dasypus: Hoffman, 1970, Radford Review, 24: 144.

Range: Apparently confined to a limited area in the vicinity of San Andres Tuxtla, Veracruz (where, however, it seems to be abundant).

Already in 1860, DeSaussure remarked, after the description of *limax*, "...Ne pourrait-on pas peut-étre rapporter ce Polydême au *P. dasypus* de Gervais?"

Rhysodesmus depressus Loomis

Rhysodesmus depressus Loomis, 1966, Ann. Entom. Soc. America, 57: 17, figs. 17-19. ♂ HT (SMUK) from an unknown locality in Mexico.

Rhysodesmus elestribus Chamberlin

Rhysodesmus elestribus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 39, figs. 87, 88. ♂ HT (USNM) from Elestribo, Michoacan, Mexico.

Rhysodesmus esperanzae Chamberlin

Rhysodesmus esperanzae Chamberlin, 1943, Bull. Univ. Utah, 34(7): 40, figs. 111, 112. ♂ HT (USNM) from Esperanza, Guanajuato, Mexico.

Loomis (1966: 19) noted a discrepancy in the figure captions on Plate XI of Chamberlin's 1943 paper, in that Figures 111-112 actually refer to *R.. esperanzae* instead of *elestribus* as credited on page 92. There seems to be no species in the text that is represented by Figures 109-110, since *elestribus* is illustrated by Figures 87 and 88, on Plate IX.

Rhysodesmus eunis Chamberlin

Rhysodesmus eunis Chamberlin, 1943, Bull. Univ. Utah, 34(7): 41. ♀ HT (USNM) from Volcán Orizaba, 3000 m., Puebla, Mexico.

Rhysodesmus eusculptus Chamberlin

Rhysodesmus eusculptus Chamberlin, 1941, Proc. Biol. Soc. Washington, 54: 64, fig. 4. ♂ HT (USNM) from Tancítaro, Michoacan, Mexico.

Rhysodesmus flavocinctus Pocock

Rhysodesmus flavocinctus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 199, pl. XV, figs. 6, 6a. Location of type material unknown, from Amula, Guerrero, Mexico.

Rhysodesmus fraternus (DeSaussure)

Polydesmus (Fontaria) fraternus DeSaussure, 1859, Linnaea Entom., 13: 322; 1860, Mem. Soc. Phys. Hist. Nat. Genève, 15: 310, figs. 16-16e. ST (MHNG) from "...les vallées du versant oriental de la Cordillère", Mexico.

Rhysodesmus fraternus: Pocock, 1910, Biol. Centr.-Amer., Diplopoda, p. 205. – Hoffman, 1970, Radford Review, 24: 155, fig. 6 (designation of lectotype from material labeled "Cordova", Veracruz, Mexico.

Rhysodesmus frionus Chamberlin

Rhysodesmus frionus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 42, figs. 107, 108. ♂ HT (USNM) from Rio Frio, Distrito Federal, Mexico.

Rhysodesmus garcianus Chamberlin

Rhysodesmus garcianus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 42, figs. 91, 92. ♂ HT (USNM) from García, Nuevo León, Mexico.

Rhysodesmus godmani Pocock

Rhysodesmus godmani Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 199, pl. 1\XV, figs. 4-4d. Location of type material unknown, from Omilteme, Guerrero, Mexico.

Rhysodesmus guardanus Chamberlin

Rhysodesmus guardanus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 43, figs. 83, 84. ♂ HT (USNM) from El Guarda, Distrito Federal, Mexico.

Rhysodesmus hamatilis Loomis

Rhysodesmus hamatilis Loomis, 1966, Ann. Entom. Soc. America, 57: 17, fig. 20. ♂ HT (SMUK) from Rancho San Felipe, Oaxaca, Mexico.

Rhysodesmus intermedius Chamberlin

Rhysodesmus intermedius Chamberlin, 1943, Bull. Univ. Utah, 34(7): 43, figs. 89, 90. ♂ HT (USNM) from Chilpanzingo, Guerrero, Mexico.

Rhysodesmus inustus Pocock

Rhysodesmus inustus Pocock, 1910, Biol. Centr.-Amer., Diplopoda, p. 202, pl. XV, figs. 10, 10a. Location of type material unknown, from Omilteme, Guerrero, Mexico.

Rhysodesmus jugosus Loomis

Rhysodesmus jugosus Loomis, 1966, Ann. Entom. Soc. America, 57: 18, figs. 21, 22. ♂ HT (SMUK) from four miles west of Yautepec, Morelos, Mexico.

Rhysodesmus knighti Chamberlin

Rhysodesmus knighti Chamberlin, 1941, Proc. Biol. Soc. Washington, 54: 65, fig. 00. ♂ HT (USNM) from Horsetail Falls at Hacienda Vista Hermosa, Villa Santiago, Nuevo León, Mexico.

Rhysodesmus latus Loomis

Rhysodesmus latus Loomis, 1968, Journ. Kansas Entom. Soc., 41: 387, figs. 4-6. ♀ HT (USNM) from Hy. 40 between Reynosa and General Bravo, Nuevo León, Mexico.

Rhysodesmus leonensis Chamberlin

Rhysodesmus leonensis Chamberlin, 1941. Proc. Biol. Soc. Washington, 54: 65, fig. 6. ♂ HT (USNM) from Sabinas Hidalgo, Nuevo León, Mexico.

Rhysodesmus malinche Chamberlin

Rhysodesmus malinche Chamberlin, 1943, Bull. Univ. Utah, 34(7): 44, figs. 93, 94. ♂ HT (USNM) from La Canada, Malinche, Tlaxcala, Mexico.

Rhysodesmus marcosus Chamberlin

Rhysodesmus marcosus Chamberlin, 1952, Ann. Entom. Soc. America, 45: 572. ♂ HT (FMNH) from El Provenir, San Marcos, Dept. San Marcos, Guatemala.

Rhysodesmus mayanus Chamberlin

Rhysodesmus mayanus Chamberlin, 1925, Proc. Biol. Soc. Washington, 38: 44. ? HT (MCZ) from "Yucatan" Mexico, without further locality.

Rhysodesmus minor (Chamberlin)

Acentronus minor Chamberlin, 1943, Bull. Univ. Utah, 34(7): 50, figs. 115-116. ♂ LT (USNM) from Chilpanzingo, Guerrero, Mexico.

Rhysodesmus minor: Hoffman, 1966, Trans. American Entom. Soc., 92: 10, fig. 5 (lectotype selected).

Rhysodesmus morelus Chamberlin

Rhysodesmus morelus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 44, figs. 85, 86. ♂ HT (USNM) from Tepoztlan, Morelos, Mexico.

Rhysodesmus montezumae (DeSaussure)

Polydesmus (Fontaria) montezumae DeSaussure, 1859, Linneaea Entom., 13: 323; Mem. Soc. Phys. Hist. Nat. Genève, 15: 308, figs. 9, 9a-c. ♂ & ♀ ST (MHNG) from ". . .Mirador et dans les environs de Cordoba, sur le versant oriental de la Cordillère. . .aussi sur le plateau d'Anahuac, autour Puebla et de Cholchicomula."

Rhysodesmus montezumae: Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 195 (name only, conspecificity of material from Orizaba with typical *montezumae* uncertain).

I have been able to locate only two specimens authentically labeled as *montezumae* in the MHNG, a female from Moyoapan, and a male from "Puebla", this latter individual has been labeled as lectotype of the species and is herewith so designated.

Rhysodesmus murallensis Loomis

Rhysodesmus murallensis Loomis, 1966, Ann. Entom. Soc. America, 59: 18, figs. 23, 24. ♂ HT (SMUK) from two miles south/ three miles east, of Muralla, Coahuila, Mexico.

Rhysodesmus mystecus (Humbert & DeSaussure)

Polydesmus (Fontaria) mystecus Humbert & DeSaussure, 1869, Rev. & Mag. Zool. (2): 21: 150. ST (MHNG) from "Mexico temperata". – DeSaussure & Humbert, 1872, Miss. Sci. Mexique, Zool., 6(2): 32, pl. II, figs. 3, 3a-c. ("le Mexique; Cordillère oriental, région moyenne.")

Rhysodesmus mystecus: Pocock, 1910, Biol. Centr.-Amer., Diplopoda, p. 206.

The MHNG contains a small series of specimens labeled as "types" of *mystecus*, all from "Sta. Cruz, Moyoapan [Veracruz], région des pins." None has yet been selected as lectotype.

Rhysodesmus nahuus (Humbert & DeSaussure)

Polydesmus (Fontaria) nahuus Humbert & DeSaussure, 1869, Rev. & Mag. Zool. (2) 21: 151. ♂ ♀ ST (MHNG?) from "Mexique temperata." – DeSaussure & Humbert, 1872, Miss. Sci. Mexique, Zool. 6(2): 36, pl. I, figs. 6, 6a-b ("le Mexique; Cordillère orientale").

Rhysodesmus nahuus Pocock, 1910, Biol. Centr.-Amer., Diplopoda, p. 206.

Material of this species not seen by me in the MHNG, although eight specimens were specified in 1872.

Rhysodesmus notostictus Pocock

Rhysodesmus notostictus Pocock, 1910, Biol. Centr.-Amer., Diplopoda, p. 202, pl. XV, figs. 10, 10a. Location of type material unknown, from Omilteme [Omiltemi], Guerrero, Mexico.

Rhysodesmus obliquus Loomis

Rhysodesmus obliquus Loomis, 1966, Ann. Entom. Soc. America, 59: 19, figs. 25, 26. ♂ HT (SMUK) from 7.5 miles SE of Amecameca, Mexico, Mexico.

Rhysodesmus otomitus (DeSaussure)

Polydesmus (Fontaria) otomitus DeSaussure, 1859, Mem. Soc. Phys. Hist. Nat. Genève, 15: 57. ♂ ♀ ST (MHNG) from "Le plateau Mexique et les terres tempérées (Cordova)".

Rhysodesmus otomitus: Pocock, 1910, Biol. Centr.-Amer., Diplopoda, p. 207.

At present, MHNG has only one immature male labeled as *otomitus,* if no others are located it will become lectotype by default (artificial selection).

Rhysodesmus perotenus Chamberlin

Rhysodesmus perotenus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 45, figs. 95, 96. ♂ HT (USNM) from 18 miles north of Perote, Veracruz, Mexico.

Rhysodesmus potosianus Chamberlin

Rhysodesmus potosianus Chamberlin, 1942, Canadian Entom., 74: 91, fig. 2. ♂ HT (USNM) from Tamozunchole, San Luis Potosí, Mexico.

Rhysodesmus punctatus Loomis

Rhysodesmus punctatus Loomis, 1966, Ann. Entom. Soc. America, 59: 19, figs. 27-29. ♂ HT (SMUK) from Xilitla, San Luis Potosí, Mexico.

Rhysodesmus pusillus Pocock

Rhysodesmus pusillus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 197, pl. XIV, figs. 7, 7a; pl. XV, fig. 9. ♂ HT (?BMNH, unverified) labeled only "Mexico."

Rhysodesmus restans Hoffman

Rhysodesmus restans Hoffman, 1998, Myriapodologica, 5: 78, figs. 1-4. ♂ HT (VMNH) from hillside off Va. Rte. 620, 2 km NE of Mendota, Washington Co., Virginia.

Rhysodesmus rubrimarginis Chamberlin

Rhysodesmus rubrimarginis Chamberlin, 1943, Bull. Univ. Utah, 34(7): 46, figs. 99, 100. ♂ HT (USNM) from Tacubaya, Distrito Federal, Mexico.

Rhysodesmus sandersi Causey

Rhysodesmus sandersi Causey, 1954, Proc. Biol. Soc. Washington, 67: 64, figs. 00-00. ♂ HT (INHS) from Tamazunchole, San Luis Potosí, Mexico.

Range: Recorded also from 10 miles west of Xilitla, San Luis Potosí (Loomis, 1966).

Rhysodesmus semiovatus Loomis

Rhysodesmus semiovatus Loomis, 1966, Ann. Entom. Soc. America, 59: 22, figs. 32, 33. ♂ HT (SMUK)from 25 miles west of Ciudad Hidalgo, Michoacan, Mexico.

Rhysodesmus seriatus Chamberlin

Rhysodesmus seriatus Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelpha, 99: 31, fig. 17. ♂ HT (ANSP) from Cieneguillas, Nuevo León, Mexico.

Rhysodesmus simplex Loomis

Rhysodesmus simplex Loomis, 1966, Ann. Entom. Soc. America, 59: 22, figs. 34, 35. ♂ HT (SMUK) from an unspecified locality in Mexico.

Perhaps this species should be referred to another genus, on account of the very simple gonopod structure.

Rhysodesmus smithi Pocock

Rhysodesmus smithi Pocock, 1910, Biol. Centr.-Amer., Diplopoda, p. 201, pl. XV, figs. 12, 12a. Location of type material unknown, from Omilteme, Guerrero, Mexico.

Rhysodesmus stolli Pocock

Rhysodesmus stolli Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 198, pl. XV, figs. 3, 3b. Location of type material unknown, from Retalhuleu, Dept. Retalhuleu, Guatemala.

Rhysodesmus tabascensis Pocock

Rhysodesmus tabascensis Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 198, pl. XV, figs. 2, 2a. Location of female holotype unknown, from Teapa, Tabasco, Mexico. – Hoffman, 1971, Radford Review, 24:159, figs. 12, 13.

Range: Recorded from Palenque, Chiapas, and a number of localities in the central valley of that state (Hoffman, 1971).

Rhysodesmus tacubayae Chamberlin

Rhysodesmus tacubayae Chamberlin, 1943, Bull. Univ. Utah, 34(7): 46, figs. 101, 102. ♂ HT (USNM) from Tacubaya, Distrito Federal, Mexico.

Rhysodesmus tepanecus (DeSaussure)

Polydesmus (Fontaria) tepanecus DeSaussure, 1859, Linnaea Entom., 13: 321; 1860, Mém. Soc. Phys. Hist. Nat. Genève, 15: 319, figs. 17, 17a-c. ♂♀ ST (MHNG) from "Les terres chaudes du Mexique. – Cordova."

Rhysodesmus tepanecus: Pocock, 1910, Biol. Centr.-Amer., Diplopoda, p. 207. – Hoffman, 1971, Radford Review, 24: 153, figs. 5, 7 (designation of male syntype labeled "Cordova" as lectotype; female from Moyoapan, near Orizaba, Veracruz, as lectoparatype).

Rhysodesmus pater Chamberlin, 1943, Bull. Univ. Utah, 34(7): 45, figs. 97, 98. ♂ HT (USNM) from "near Fortin", Veracruz. Synonymized by Hoffman, 1971.

Range: Upper valley of the Rio Cotaxtla, central western Veracruz.

Rhysodesmus tepoztlanus Chamberlin

Rhysodesmus tepoztlanus Chamberlin, 1943, Bull. Univ. Utah, 43(7): 47, figs. 103, 104. ♂ HT (USNM) from Tepoztlan, Morelos, Mexico.

Rhysodesmus texicolens (Chamberlin)

Aporiaria texicolens Chamberlin, 1938, Proc. Biol. Soc. Washington, 51: 207. ♂ HT (USNM) from Edinburg, Hidalgo Co., Texas.

Rhysodesmus texicolens Chamberlin, 1943, Proc. Biol. Soc. Washington, 56: 143.

Rhysodesmus brachus Chamberlin, 1941, Proc. Biol. Soc. Washington, 54: 63, fig. 3. ♂ HT (USNM) from Ojo de Agua, Sabinas Hidalgo, Nuevo León, Mexico. Synonymized by Hoffman, 1971.

Rhysodesmus viabilis Chamberlin, 1943, Bull. Univ. Utah, 34(7): 47, Figs. 105, 106. ♂ HT (USNM) from five miles west of El Folorn, Tamaulipas, Mexico. Synonymized by Hoffman, 1971.

Rhysodesmus quadruplus Loomis, 1966, Ann. Entom. Soc. America, 59: 20, figs. 30, 31. ♂ HT (SMUK) from two miles south of Ciudad Victoria, Tamaulipas, Mexico. Synonymized by Hoffman, 1971.

Range: Rio Grande valley in Texas, south through Nuevo León and Tamaulipas to northern San Luis Potosí (map, Hoffman, 1971, fig. 4).

Rhysodesmus toltecus (DeSaussure)

Polydesmus (Fontaria) toltecus DeSaussure, 1859, Linnaea Entom., 13: 322; 1860, DeSaussure, Mém. Soc. Phys. Hist. Nat. Genève, 15: 323. ♂ HT (MNHG) from "Le versant oriental de la Cordillère du Mexique et le bord du plateau."

Rhysodesmus toltecus: Pocock, 1910, Biol. Centr.-Amer., Diplopoda, p. 208. – Hoffman, 1971, Radford Review, 24: 155.

Polydesmus (Fontaria) mayus DeSaussure, 1859, Linnaea Entom., 13: 322. ♂ HT (?MHNG) from "Cordillière du Mexico". Synonymized by DeSaussure, 1860 (see commentary below concerning type).

Polydesmus (Leptodesmus) granulosus DeSaussure, 1859, Linnaea Entom., 13: 323. HT (?MHNG) from "Cordova au Mexique." Synonymized by DeSaussure, 1860 (see commentary below concerning type). Junior primary homonym of *Polydesmus granulosus* Palisot de Beauvois, 1805.

Rhysodesmus amplinus Chamberlin, 1952, Ann. Entom. Soc. America, 45: 571. ♂ HT (FMNH) from El Fortin de las Flores, Veracruz, Mexico. Synonymized by Hoffman, 1971.

Range: Valley of the Rio Cotaxtla, central western Veracruz.

The type material of *toltecus* at Genève consists of a single male labeled as "type", from Cordova. There are no specimens labeled as either *mayus* or *granulosus*, since these two names were discarded by DeSaussure himself in 1860, perhaps he removed any labels that might have indicated such identifications and/or type status.

Rhysodesmus totonacus (DeSaussure)

Polydesmus (Fontaria) totonacus DeSaussure, 1859, Linnaea Entom., 13: 321; 1860, Mém. Soc. Phys. Hist. Nat. Genève, 15: 22, pl. 2, fig. 14. Type material (MHNG) stated to inhabit ". ..le plateau de l'Anahuac et les montagnes qui s'élèvent sur le plateau."

Rhysodesmus totanacus [*sic*!]*;* Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 196, pl. 14, figs. 8, 8a.– Loomis, 1968, Bull. U. S. Nat. Mus., 266: 63.

The Genève collection contains a single male labeled as type of *totonacus* from "Pic d'Orizaba". I had assumed this specimen to be the original holotype, inasmuch as DeSaussure (1860: 324) indicated no further material at hand. However, Pocock (1909: 196) described a male in the British Museum from "Peak of Orizaba"(unfortunately without further information) as agreeing perfectly with the original description and figures, and since this specimen might have been donated or traded by DeSaussure, perhaps it and the Genève animal are actually two syntypes. To anticipate such a possibility, I venture to designate the MHNG specimen as **lectotype** of *totonacus*.

Rhysodesmus vicinus (DeSaussure)

Polydesmus (Fontaria) vicinus DeSaussure, 1859, Linnaea Entom., 13: 322; 1860, Mém. Soc. Phys. Hist. Nat. Genève, 15: 318. Type material (?MHNG) from ". . .le plateau de l'Anahuac, toutefois on l'a pris á Oaxaca. . ." (See comments below).

Rhysodesmus vicinus: Pocock, 1910, Biol. Centr.-Amer., Diplopoda, p. 209.

?*Rhysodesmus vicinus:* Loomis, 1966, Ann. Entom. Soc. America, 59: 23.

I have been unable to locate material of this species in the Geneva collection or elsewhere. Although Loomis's identification of material from Monte Alban, Oaxaca, as *vicinus* may be correct, a definitive closure of this problem requires designation of a neotype (ideally from the region of Anahuac, *i.e.*, the central plateau of Puebla), to establish the identity of the name; comparison can then be made with Loomis's Oaxaca material (SMUK) to establish the characters of that taxon. Until then, *vicinus* will remain on the books as a *nomen inquirendum*.

Rhysodesmus violaceus (Brolemann)

Fontaria violacea Brolemann, 1900, Mém. Soc. Zool. France, 13: 101, figs. 33-36. ♂ HT (MHNP) from "Guatemala" without further locality.

Rhysodesmus violaceus: Pocock, 1910, Biol. Centr.-Amer., Diplopoda, p. 208, pl.15, fig. 15.

Range: Recorded also from Monte Metapan, El Salvador, by Kraus (1954).

Rhysodesmus zapotecus (DeSaussure)

Polydesmus (Fontaria) zapotecus DeSaussure, 1860, Mém. Soc. Phys. Hist. Nat., Genève, 15: 314, pl. 2, fig. 11, 11a-f. Type material (?MHNG) from "Les régions chaudes du Mexique. – San-Andres-Tuxtla, etc."

Rhysodesmus zapotecus: Pocock, 1910, Biol. Centr.-Amer., Diplopoda, p. 209.

I have not located material labeled as this species in the Geneva collection or elsewhere. Being very carefully described from a precise type locality, it should be no problem to establish the identity of *zapotecus* from topotypic material.

Rhysodesmus zendalus (Humbert & DeSaussure)

Polydesmus Zendalus Humbert & DeSaussure, 1869, Rev. & Mag. Zool., (2) 21: 150 ("Mexico orientalis"); ♂♀ ST (MHNG) labeled "Moyoapan [near Orizaba, Veracruz], Mexique."

Polydesmus (Fontaria) Zendalus DeSaussure & Humbert, 1872,, Miss. Sci. Mexique, Zool., 6(2): 34, pl. 2, figs. 1, 1a ("Cordillère orientale.")

Rhysodesmus zendalus: Pocock, 1910, Biol. Centr.-Amer., Diplopoda, p. 209.

Genus **Stenodesmus** DeSaussure

Stenodesmus DeSaussure, 1859, Linnaea Entom., 13: 327. Type species: *S. mexicanus* DeSaussure, by monotypy.– Hoffman, 1966, Trans. American Entom. Soc., 92: 4.

Cruzodesmus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 48. Type species: *C. ergus* Chamberlin, by original designation. Synonymized by Hoffman, 1966.

Cibularia Chamberlin & Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 71: 4. Type species: *Fontaria tuobita* Chamberlin, 1910. Synomized by Hoffman, 1980.

Five species: New Mexico to Veracruz.

Stenodesmus acuarius (Attems), new combination

Rhysodesmus acuarius Attems, 1931, Zoologica, 30(79): 63, fig. 98. ♂ HT (NMW) from Orizaba, Veracruz, Mexico.

Cruzodesmus browni Chamberlin, 1943, Bull. Univ. Utah, 34(7): 49, fig. 119. ♂ HT (USNM) from "Near Fortin", Veracruz, Mexico. Synonymized by Hoffman, 1966.

Cibularia acuaria: Hoffman, 1966, Trans. American Entom. Soc., 92: 15, figs. 8, 9.

Range: Southern Veracruz, Mexico.

Stenodesmus mexicanus DeSaussure

Stenodesmus mexicanus DeSaussure, 1859, Linnaea Entom., 13: 327. ♂ HT (MHNG) from Cordova [= Cordoba], Veracruz, Mexico.– Carl, 1903, Rev. Suisse Zool., 11: 561, fig. 20. – Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 187. – Hoffman, 1966, Trans. American Entom. Soc., 92: 5, figs. 1-3.

Cruzodesmus ergus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 48, figs. 117, 118. ♂ HT (USNM) from "near Fortin", Veracruz, Mexico. Synonymized by Hoffman, 1966.

Range: Southern Veracruz (Cordoba and El Fortin de las Flores).

Stenodesmus simillimus (Humbert & DeSaussure), new combination

Polydesmus (Fontaria) simillimus Humbert & DeSaussure, 1869, Rev. & Mag. Zool., (2) 21: 150 ("Mexico temperata")

Polydesmus (Fontaria) simillimus: DeSaussure & Humbert, 1872, Miss. Sci. Mexico, Zool., 6(2): 31, pl. I, figs. 5, 5a-b. ♂♀ ST (MHNG) from Santa Cruz, near Orizaba, Veracruz, Mexico.

Rhysodesmus simillimus: Pocock, 1910, Biol. Centr.-Amer., Diplopoda, p. 207.

Cruzodesmus purojenus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 49, figs. 120-122. ♂ HT (USNM) from Puroje Nuevo [*sic!* = Nuevo Paraje, near Cordoba], Veracruz, Mexico. Synonymized by Hoffman, 1966.

Cibularia simillima: Hoffman, 1966, Trans. American Entom. Soc., 92: 16, figs. 10, 11.

Range: Southern Veracruz.

Stenodesmus serratus (Loomis)

Cruzodesmus serratus Loomis, 1959, Ann. Entom. Soc. America, 59: 13, fig. 9. ♂ HT (SMUK) from one mile east of Xilitla, San Luis Potosí, Mexico.

Stenodesmus serratus: Hoffman, 1980, Classification of the Diplopoda, p. 158 (de facto new combination implied by synonymy of *Cruzodesmus* with *Stenodesmus*).

Stenodesmus tuobitus (Chamberlin)

Fontaria tuobita Chamberlin, 1910, Ann. Entom. Soc. America,3: 243, pl. 35, figs. 7, 8. ♂ HT (location unknown, presumed lost), from Sacremento Mountains near Cloudcroft, Otero Co., New Mexico.

Nannaria ursa Chamberlin, 1938, Proc. Biol. Soc. Washington, 51: 207. ♂ HT (USNM) from Camp Mary White near Cloudcroft, Otero Co., New Mexico. Synonymized by Chamberlin & Hoffman, 1950.

Cibularia tuobita: Chamberlin & Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 71: 5; 1958, Bull. U. S. Nat. Mus., 212: 28.

Aporiaria anamesa Chamberlin & Mulaik, 1941, Journ. New York Entom. Soc., 49: 57. ♀♀ ST (USNM) from Camp Mary White, near Cloudcroft, Otero Co., New Mexico. Synonymized by Hoffman, 1966.

Stenodesmus tuobitus: Hoffman, 1980, Classification of the Diplopoda, p. 158 (de facto new combination, implied by synonymy of *Cibularia* and *Stenodesmus*). – Shelley, 1987, Nat. Geogr. Res., 3: 336 (ecology and distribution).

Range: Sacramento Mountains, New Mexico; Guadelupe Mountains, Texas (map, Shelley, 1987, fig. 3).

GENERA PROVISIONALLY REFERRED TO RHYSODESMINI

Genus **Caralinda** Hoffman

Caralinda Hoffman, 1978, Proc. Biol. Soc. Washington, 91: 365. Type species: *C. beatrix* Hoffman, by original designation. – Shelley, 1983, Florida Entom., 66: 407-415, figs. 1-11 (synopsis).

Four species: Southeastern United States (Georgia, Alabama, Florida).

Caralinda beatrix Hoffman

Caralinda beatrix Hoffman, 1978, Proc. Biol. Soc. Washington, 91: 366, figs. 1-10. ♂ HT (USNM) from Tifton, Tift Co., Georgia.

Caralinda causeyae Shelley

Caralinda causeyi [sic!] Shelley, 1983, Florida Entom., 66: 410, figs. 1-5. ♂ HT (FSCA) from Tall Timbers Research Station, 22 miles north of Tallahassee, Leon Co., Florida.

Range: Southern Georgia and north central Florida (map, Shelley 1983, fig. 11).

Caralinda dactylifera Shelley

Caralinda dactylifera Shelley, 1983, Florida Entom., 66: 412, figs. 6-10. ♂ HT (FSCA) from Panama City, Bay Co., Florida.

Range: Bay and Walton counties, Florida (map, Shelley 1983, fig. 11).

Caralinda pulchritecta Shelley

Caralinda pulchritecta Shelley, 1979. Florida Entom., 62: 183-87, figs. 1-6. ♂ HT (USNM) from Welcome Center on US Hy. 231, 3 miles north of Campbellton, Jackson Co., Florida.

Range: Jackson Co., Florida; Houston Co., Alabama (map, Shelley 1983, fig. 11).

Genus **Gonoessa** Shelley

Gonoessa Shelley, 1984, Florida Entom., 67: 455. Type species: *G. clavata* Shelley, 1984, by original designation.

Five species, southeastern United States (map, Shelley, 1984, fig. 10).

Gonoessa aciculata Shelley

Gonoessa aciculata Shelley, 1984, Florida Entom., 67: 458, figs. 4, 5. ♂ HT (USNM) from AL Hy. 26 at Steep Creek, 6.8 miles east of Hayneville, Lowdnes Co., Alabama.

Gonoessa cingulata Shelley

Gonoessa cingulata Shelley, 1984, Florida Entom., 67: 460, figs. 6, 7. ♂ HT (VMNH) from Dry Creek, seven miles southwest of Montgomery, Montgomery Co., Alabama.

Gonoessa clavata Shelley

Gonoessa clavata Shelley, 1984, Florida Entom., 67: 456, figs. 1-3. ♂ HT (USNM) from beside AL Hy. 41, 7.2 miles northeast of Camden, Wilcox Co., Alabama.

Range: Recorded from Lowndes, Clarke, Washington, and Wilcox counties, southern Alabama.

Gonoessa dentata Shelley

Gonoessa dentata Shelley, 1984, Florida Entom., 67: 461, fig. 8. ♂ HT (USNM) from beside US Hwy. 431, 2.7 miles south of Eufaula, Barbour Co., Alabama.

Range: Recorded also from Montgomery Co., Alabama.

Gonoessa furcata Shelley

Gonoessa furcata Shelley, 1984, Florida Entom., 67: 461, fig. 9. ♂ HT (USNM) from beside US Hy. 31 just south of Pintalalla (13.1 miles SSW Montgomery), Montgomery Co., Alabama.

Range: Recorded also from Lowndes Co., Alabama.

Genus **Lourdesia** Shelley

Lourdesia Shelley, 1991, Proc. Entom. Soc. Washington, 93: 245. Type species: *L. minuscula* Shelley, by original designation.

One species, southeastern United States.

Lourdesia minuscula Shelley

Lourdesia minuscula Shelley, 1991, Proc. Ent. Soc. Washington, 93: 246, figs. 1-4. ♂ HT (FSCA) from beside US Hy. 84, 5.5 miles east of Elba, Coffee Co., Alabama.

Range: Also recorded from Baldwin Co., Alabama.

Genus **Parvulodesmus** Shelley

Parvulodesmus Shelley, 1983, Proc. Biol. Soc. Washington, 96: 121. Type species: *P. prolixogonus* Shelley, by original designation.

One species, southeastern United States.

Parvulodesmus prolixogonus Shelley

Parvulodesmus prolixogonus Shelley, 1983, Proc. Biol. Soc. Washington, 96: 122, figs. 1-4. ♂ HT (VMNH) from Abbeville, Abbeville Co., South Carolina.

Tribe Chonaphini Verhoeff

Chonaphinae Verhoeff, 1941, Arch. Naturg., 10: 403.

Chonaphini Hoffman, 1980, Classification of the Diplopoda, p. 157. – Shelley, 1994, Brimleyana, 20: 111 (revision).

Six genera, northcentral and northwestern North America.

The status and content of this taxon remain uncertain despite Shelley's careful revision, particularly regarding its separation from the Harpaphini. Some species of *Selenocheir* strikingly resemble those of the multiformous Asiatic genus *Riukiaria*, whilst those in the genera *Semionellus* and *Montaphe* appear quite disjunct. Shelley's summary remark (op. cit.: 194) accurately portrays the situation: ". . .the Chonaphini is closely related to the Harpaphini, and . . . the component taxa of both groups demonstrate a broad range of expressions of a suite of anatomical features."

Genus **Chonaphe** Cook

Chonaphe Cook, 1904, Harriman Alaska Exped., 8: 56. Type species: *Polydesmus armatus* Harger, 1872, by original designation. – Shelley, 1994, Brimleyana, 20: 128 (revision).

Four species, Washington, Oregon, Idaho, Montana.

Chonaphe armata (Harger)

Polydesmus armatus Harger, 1872, Amer. Journ. Sci. Arts, 4: 119, fig. 8. ♂ F ST (PMNH) from the vicinity of Canyon City, Grant Co., Oregon.

Chonaphe armata: Cook, 1904, Harriman Alaska Exped., 8: 56, pl. III, figs. 2a-c. – Shelley, 1994, Brimleyana, 20: 131, figs. 2-8, 68.

Chonaphe cygneia Chamberlin, 1949, Proc. Biol. Soc. Washington, 62: 125, fig. 1. ♂ HT (USNM) from White Swan, Yakima Co., Oregon. Synonymized by Shelley, 1994.

Chonaphe patriotica Chamberlin, 1949, Proc. Biol. Soc. Washington, 62: 127, figs. 2, 3. ♂ HT (USNM) from Fourth of July Canyon, Kootenai Co., Idaho. Synonymized by Shelley, 1994.

Chonaphe serratus Loomus & Schmitt, 1971, Northwest Sci., 45: 111, figs. 1-2. ♂ HT (USNM) from one mile west Noxon, Sanders Co., Montana. Synonymized by Shelley, 1994.

Range: Known from five apparently disjunct areas in Oregon, Washington, Idaho, and Montana (map, Shelley, Figs. 68, 70).

Chonaphe evexa Shelley

Chonaphe evexa Shelley, 1994, Brimleyana, 20: 341, figs. 15-20. ♂ HT (UCD) from nine miles north of Agness, Coos Co., Oregon.

Chonaphe remissa Chamberlin

Chonaphe armata Attems, 1931, Zoologica (Stuttgart) 79, : 65, figs. 100, 101 (misidentification).

Chonaphe remissa Chamberlin, 1949, Proc. Biol. Soc. Washington, 62: 127, figs. 4, 5. ♂ HT (USNM) from Puyallup, Pierce Co., Washington. – Shelley, 1994, Brimleyana, 20: 139, figs. 9-14.

Range: Washington state, south and southeast of Puget Sound, recorded from King, Pierce, Mason, Gray's Harbor, and Thurston counties (Map, Shelley, 1994, figs. 68, 70).

Chonaphe schizoterminalis Shelley

Chonaphe schizoterminalis Shelley, 1994, Brimleyana, 20: 144, figs. 21-26. ♂ HT (MCZ) from Springdale, Stevens Co., Washington.

Genus **Metaxycheir** Buckett & Gardner

Metaxycheir Buckett & Gardner, 1969, Proc. Entom. Soc. Washington, 81: 67. Type species: *M. Prolata* Buckett & Gardner, by original designation. – Shelley, 1994, Brimleyana, 20: 171.

One species, Washington, Idaho.

Metaxycheir prolata Buckett & Gardner

Metaxycheir prolata Buckett & Gardner, 1969, Proc. Entom. Soc. Washington, 81: 67, figs. 1-6. ♂ HT (UCD) from seven miles northeast of Moscow, Latah Co., Idaho. – Shelley, 1994, Brimleyana, 20: 171, figs. 50-53a.

Range: Southeastern Washington (Whitman County) and adjacent northern Idaho (Benewah and Latah counties). (Map, Shelley, 1994, figs. 68, 70).

Genus **Montaphe** Chamberlin

Montaphe Chamberlin, 1949, Proc. Biol. Soc. Washington, 62: 127. Type species: *Leptodesmus (Chonaphe) elrodi* Chamberlin, 1913, by original designation. – Shelley, 1994, Brimleyana, 20: 156 (revision).

Two species, Washington, Idaho, Montana.

Montaphe elrodi (Chamberlin)

Leptodesmus (Chonaphe) elrodi Chamberlin, 1913, Canadian Entom., 45: 424, fig. 17. ♂ LT (MCZ) from Flathead Lake, Flathead Co., Montana.

Montaphe elrodi: Chamberlin, 1949, Proc. Biol. Soc. Washington, 62: 127. – Shelley, 1994, Brimleyana, 20: 160, figs. 33-39 (revision; lectotype).

Range: Eastern Washington, northern Idaho, western Montana (map, Shelley 1994, figs. 68, 70).

Montaphe paraphoena Shelley

Montaphe paraphoena Shelley, 1994, Brimleyana, 20: 165, figs. 40-44. ♂ HT (Univ. Washington Biol. Mus.) from Tichenal Canyon, 7.5 miles south, 1.5 mile east of Waterville, Douglas Co., Washington.

Genus **Selenocheir** Shelley

Selenocheir Shelley, 1994, Brimleyana, 20: 175. Type species: *S. sinuata* Shelley, by original designation.

Three species, northern California, southwestern Oregon.

Selenocheir arcuata Shelley

Selenocheir arcuata Shelley, 1994, Brimleyana, 20: 183, figs. 59-63. ♂ HT (UCD) from Black Rock Camp, Mill Creek, 18.8 miles northeast of Red Bluff, Tehama Co., California.

Range: Northern California (Tehama, Mendocino, Humboldt, Lake counties). (map, Shelley, 1994, figs. 68, 70).

Selenocheir directa Shelley

Selenocheir directa Shelley, 1994, Brimleyana, 20: 186, figs. 64-67. ♂ HT (USNM) from Patrick Creek campground, U.S. Hy. 199, 7 miles northeast of Gasquet, Del Norte Co., California.

Range: Northwestern California and adjacent southwestern Oregon (map, Shelley, 1994, figs. 68, 70).

Selenocheir sinuata Shelley

Selenocheir sinuata Shelley, 1994, Brimleyana, 20: 179, figs. 53b-58. ♂ HT (UCD) from two miles southwest of Dales, Tehama Co., California.

Range: Recorded from six counties in northern California (map, Shelley, 1994, figs. 68, 70).

Genus **Semionellus** Chamberlin

Semionellus Chamberlin, 1920, Proc. Biol. Soc. Washington, 33: 97. Type species: *Polydesmus (Leptodesmus) placidus* Wood, 1864, by original designation. – Shelley, 1994, Brimleyana, 20: 147.

One species, central Appalachians and Interior Lowlands, United States.

Removed from genus: *Semionellus tertius* Chamberlin, 1948 (see *Aphelidesmus,* p. 393).

Semionellus placidus (Wood)

Polydesmus (Leptodesmus) placidus Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 9. Type material presumed lost, from "Michigan" without further data; 1865, Trans. American Philos. Soc., n. s. 13: 225, fig. 56.

Polydesmus (Leptodesmus) floridus Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, (16): 9. Type material presumed lost, from "Michigan" without further data. Synonymized by Bollman, 1893.

Leptodesmus borealis Bollman, 1893, Bull. U. S. Nat. Mus. 46: 183. Immature ?ST (USNM) from Winona, Winona Co., Minnesota. Synonymized by Chamberlin & Hoffman, 1958.

Semionellus placidus: Chamberlin, 1920, Proc. Biol. Soc. Washington, 33: 97. – Shelley, 1994, Brimleyana, 20: 149, figs. 27-32.

Chonaphe michigana: Chamberlin, 1946, Proc. Biol. Soc. Washington, 59: 31, fig. 1. ♂ HT (USNM) from Midland County, Michigan. Synonymized by Chamberlin & Hoffman, 1958.

Range: Known from four seemingly disjunct areas: Wisconsin-Minnesota; Michigan; Indiana-Ohio; Maryland-West Virginia-central northern Virginia (map, Shelley, 1994, fig. 69).

Genus **Tubaphe** Causey

Tubaphe Causey, 1954, Pan-Pacific Entom., 30: 222. Type species: *T. levii* Causey, 1954, by original designation. – Shelley, 1994, Brimleyana, 20: 167.

One species, Washington; British Columbia.

Tubaphe levii Causey

Tubaphe levii Causey, 1954, Pan-Pacific Entom., 30: 223, figs. 2-4. ♂ HT (AMNH) from Graves Creek campground, Olympic National Park, Jefferson Co., Washington. – Shelley, 1994, Brimleyana, 20: 169, figs. 45-49.

Metaxycheir pacifica Shelley, 1990, Canadian Journ. Zool., 68: 2311, figs. 1-5. ♂ HT (Royal Brit. Col. Mus.) from Port Renfrew, Vancouver Island, British Columbia. Synonymized by Shelley, 1994.

Range: Northern half of the Olympic peninsula. Washington, and facing southern end of Vancouver Island, British Columbia (map, Shelley, 1994, figs. 68, 70).

Tribe Harpaphini Hoffman

Harpaphini Hoffman, 1980, Classification of the Diplopoda, p. 157

Six or seven genera, western United States, eastern Asia.

Removed from tribe: *Tubaphe* Causey, 1955 [see Chonaphini, *supra*].

Shelley (1994: 194) has already demonstrated the proximity of this nominal taxon to the largely sympatric Chonaphini; existing distinctions may prove to be illusory.

Genus **Harpaphe** Cook

Harpaphe Cook, 1904, Harriman Alaska Exped., 8: 59. Type species: *Polydesmus haydenianus* Wood, 1864, by original designation. – Buckett & Gardner, 1968, Occ. Pap. California Dept. Agric., Bur. Entom., 11: 1-51.

Three species, one of them with six subspecies; western North America (California-British Columbia).

Harpaphe haydeniana haydeniana (Wood)

Polydesmus (Leptodesmus) haydenianus Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 10; 1865, Trans. American Philos. Soc., 13: 226, fig. 57. Original type material, from "Oregon" lost. NT ♂ (UCD) from nine miles north of Agness, Coos Co., Oregon, designated by Buckett & Gardner, 1968.

Polydesmus intaminatus Karsch, 1881, Arch. Naturg., 47: 41. ♂ HT (ZMB) labeled only "California". Synonymized by Buckett & Gardner, 1968.

Fontaria Simoni Brolemann, 1896, Ann. Soc. entom. France, 65: 65, figs. 19, 20. ♂ HT (MHNP) from Washington (state), without further locality. Synonymized with *intaminata* by Attems, 1938, with *haydeniana* by Chamberlin & Hoffman, 1958.

Harpaphe haydeniana: Cook, 1904, Harriman Alaska Exped., 8: 59, pl. 4, figs. 4a-c.

Harpapahe intaminata: Cook, 1904, Harriman Alaska Exped., 8: 60.

Isaphe simplex Chamberlin, 1918, Pomona Coll. Journ. Entom. Zool., 10: 9. ♂ HT (MCZ) from "California" without further locality. Synonymized with *haydeniana* by Shelley, 1993.

Harpaphe penulta Chamberlin, 1949, Proc. Biol. Soc. Washington, 63: 128, fig. 9. ♂ HT (USNM) from nine miles south of Belknap Springs, Lane Co., Oregon. Synonymized by Buckett & Gardner, 1968.

Harpaphe haydeniana haydeniana: Buckett & Gardner, 1968, Occ. Pap. Bur. Entom. California Dept. Agr., 11: 18, figs. 4, 13-15 (description, distribution).

Range: Southern Alaska south to central western Oregon; an apparently disjunct population on the California coast just north of San Francisco (map, Buckett & Gardner, 1968, figs. 1, 2).

Harpaphe haydeniana cummingsiensis (Verhoeff)

Pachydesmus cummingsiensis Verhoeff, 1944, Bull. Southern California Acad. Sci., 43, 64, fig. 14. ♂ HT (ZSBS) from Cummings, Mendocino Co., California. Synonymized with *intaminata* by Chamberlin & Hoffman, 1958; with *haydeniana* by Buckett & Gardner, 1968.

Harpaphe haydeniana cummingsiensis: Buckett & Gardner, 1968, Occ. Pap. Bur. Entom. California Dept. Agr. 11: 24, figs. 9, 22-24.

Range: Northern California coast region: Humboldt, Mendocino, Sonoma cos. (Map, Buckett & Gardner, 1968, fig. 1).

Harpaphe haydeniana inlignea Chamberlin

Harpaphe inlignea Chamberlin, 1949, Proc. Biol. Soc. Washington, 62: 128, fig. 8. ♂ HT (USNM) from Inwood, Shasta Co., California.

Harpaphe haydeniana inlignea: Buckett & Gardner, 1968, Occ. Pap. Bur. Entom. California Dept. Agr., 11: 15, fig. 12.

Range: Sierra Nevada mountains, northern California (Shasta Co.).

Harpaphe haydeniana maurogona Buckett & Gardner

Harpaphe haydeniana maurogona Buckett & Gardner, 1968, Occ. Pap. Bur. Ent. California Dept. Agr., 11: 23, fig. 20. ♂ HT (UCD) from two miles east of Baxter, Nevada Co., California.

Harpaphe haydeniana lanceolata Buckett & Gardner

Harpaphe haydeniana lanceolata Buckett & Gardner, 1968, Occ. Pap. Bur. Ent. California Dept. Agr. 11: 22, fig. 19. ♂ HT (UCD) from Mt. Ste. Helena, Napa Co., California.

Range: Coast Ranges, northern central California (Napa and Lake cos.).

Harpaphe haydeniana scotia (Chamberlin)

Paimokia scotia Chamberlin, 1941, Bull. Univ. Utah, 31(12): 13, fig. 26. ♂ HT (USNM) from 12 miles south of Los Gatos, Santa Cruz Co., California. Synonymized with *intaminata* by Chamberlin, 1947.

Harpaphe clara Chamberlin, 1949, Proc. Biol. Soc. Washingtin, 62: 128, figs. 6, 7. ♂ HT (USNM) from Stevens Creek, Santa Clara Co., California. Synonymized by Buckett & Gardner, 1968.

Harpaphe haydeniana scotia Buckett & Gardner, 1968, Occ. Pap. Bur. Ent. California Dept. Agr., 11: 21, figs. 7, 16-18, frontispiece.

Range: Central coastal region of California (Santa Cruz, Santa Clara, Monterey cos.); a possibly disjunct population in Yosemite National Park (map, Buckett & Gardner, 1968, fig. 1).

Harpaphe pottera Chamberlin

Harpaphe pottera Chamberlin, 1949, Proc. Biol. Soc. Washington, 62: 129, fig. 11. ♂ HT (USNM) from Potter Creek, Mendocino Co., California. – Buckett & Gardner, 1968, Occ. Pap. Bur. Entom. California Dept. Agr., 11: 15, fig. 12.

Harpaphe telodonta (Chamberlin)

Paimokia telodonta Chamberlin, 1943, Bull. Univ. Utah, 34(6): 17, fig. 33. ♂ HT (USNM) from Arcata, Humboldt Co., California.

Harpaphe telodonta Buckett & Gardner, 1968, Journ. New York Entom. Soc., 76: 60, figs. 1-3; 1968, Occ. Pap. Bur. Ent. California Dept. Agr., 11: 13, figs. 6, 8, 10, 11.

Range: Extreme northwestern California (Humboldt and Del Norte cos).

Genus **Isaphe** Cook

Isaphe Cook, 1904, Harriman Alaska Exped., 8: 57. Type species: *I. convexa* Cook, by original designation. – Shelley, 1993, Canadian Journ. Zool., 71: 1162.

Hybaphe Cook, 1904, Harriman Alaska Exped., 8: 58. Type species: *H. tersa* Cook, by original designation. Synonymized by Shelley, 1993.

Two species, Montana, Idaho, extreme southeastern Washington.

Removed from the genus: *Isaphe simplex* Chamberlin, 1918 [see *Harpaphe haydeniana, supra*].

Isaphe convexa Cook

Isaphe convexa Cook, 1904, Harriman Alaska Exped., 8: 58, pl. III, figs. 1a-b. ♂ HT (USNM) from an unspecified site in Kootenai Co., Idaho. – Shelley, 1993, Canadian Journ. Zool., 71: 1163, figs. 1-6.

Range: Northern Idaho, western Washington (map, Shelley, 1993, fig. 12).

Isaphe tersa (Cook)

Hybaphe tersa Cook, 1904, Harriman Alaska Exped., 8: 58, pl. III, fig. 3a. ♂ HT (USNM) from Almota, Whitman Co., Washington. – Shelley, 1993, Canadian Journ. Zool., 7♂1: 1166, figs. 7-11.

Hybaphe curtipes Cook, 1904, Harriman Alaska Exped., 8: 59. HT (USNM) from Pullman, Whitman Co., Washington. Synonymized by Shelley, 1993.

Range: Southeastern Washington, adjacent Idaho (map, Shelley, 1993, fig. 12).

Tribe Orophini Hoffman

Orophinae Hoffman, 1964, Trans. American Entom. Soc., 90: 301.

Orophini Hoffman, 1980, Classification of the Diplopoda, p. 157.

One genus, northwestern United States, one or two, China.

Genus **Orophe** Chamberlin

Orophe Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc., 87: 2. Type species: *O. cabinetus* Chamberlin, by original designation. – Shelley, 1993, Insecta Mundi, 7: 175-182, figs. 1-9.

Chipus Loomis, 1953, Journ. Washington Acad. Sci., 43: 421. Type species: *C. unicus* Loomis, by original designation. Synonymized by Hoffman, 1964.

Two species, northwestern United States (Idaho, Montana).

Orophe cabinetus Chamberlin

Orophe cabinetus Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc., 87: 4, figs. 8, 9. ♂ HT (USNM) from Clark's Peak, ca. three miles south-southeast of Thompson's Falls, Sanders Co., Montana. – Shelley, 1993, Insecta Mundi, 7: 178, figs. 1-3.

Range: Sanders, Lake, and Mineral counties, western Montana (map, Shelley, 1993, fig. 9).

Orophe unicus (Loomis)

Chipus unicus Loomis, 1953, Journ. Washington Acad. Sci., 43: 421, fig. 18. ♂ HT (USNM) from West Fork Emerald Creek, 3.8 miles northwest of Clarkia, Shoshone Co., Idaho. – Shelley, 1993, Insecta Mundi, 7: 180, figs. 4-8.

Range: Northern Idaho (Benewah, Latah, Shoshone, Clearwater, and Idaho counties) (map, Shelley 1993, fig. 9).

Considered as probably only a subspecies of *cabinetus* by Hoffman, 1964.

Tribe Nannarini Hoffman

Nannarini Hoffman, 1964, Proc. Biol. Soc. Washington, 77: 26.

Two genera, eastern United States.

Genus **Nannaria** Chamberlin

Nannaria Chamberlin, 1918, Psyche, 25: 124. Type species: *N. minor* Chamberlin, by original designation.

Mimuloria Chamberlin, 1928, Ent. News, 39: 155. Type species: *M. missouriensis* Chamberlin, by original designation.

Castanaria Causey, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 73: 1. Type species: *C. depalmai* Causey, by original designation.

25 named species (some of which are unquestionably junior synonyms), central and northeastern United States. Existing collections contain about three times this many undescribed taxa from the Appalachian region alone, and *Nannaria* will likely be divided into a number of additional genera.

Removed from genus: *Nannaria infesta* Chamberlin [see *Boraria*].

Nannaria austricola Hoffman

Nannaria austricola Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., 66: 26, figs. 26, 27. ♀ HT (USNM) from Highlands, Macon Co., North Carolina.

Nannaria castanea (McNeill)

Polydesmus castaneus McNeill, 1887, Proc. U. S. Nat. Mus., 10: 329, pl. 12, fig. 8. ♂ HT (USNM) from Bloomington, Monroe Co., Indiana.

Mimuloria castanea: Causey, 1952, Chicago Acad. Sci. Nat. Hist. Misc., 106: 8, fig. 6.

Nannaria conservata Chamberlin

Nannaria conservata Chamberlin, 1940, Canadian Entom., 72: 56. ♂ HT (USNM) from "Duke Forest" [probably that compartment nearest the Duke University campus], Durham Co., North Carolina. – Shelley, 1975, Proc. Biol. Soc. Washington, 88: 180, figs. 1-6 (redescription of type).

Range: Piedmont of central North Carolina: Durham, Franklin, Wake counties.

Nannaria davidcauseyi Causey

Nannaria davidcauseyi Causey, 1950, Ent. News, 61: 194, figs. 3 ,4. ♂ HT (ANSP) from near Jasper, Newton Co., Arkansas.

Nannaria depalmai (Causey)

Castanaria depalmai Causey, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 73: 1, fig. 1. ♂ HT (ANSP) from two miles south of Lake Leatherwood, Carroll Co., Arkansas.

Nannaria domestica Shelley

Nannaria domestica Shelley, 1975, Proc. Biol. Soc. Washington, 88: 186, figs. 10-12. ♂ HT (USNM) from Goforth Road, Blowing Rock, Watauga Co., North Carolina.

Nannaria equalis Chamberlin

Nannaria equalis Chamberlin, 1949, Proc. Biol. Soc. Washington, 62: 4, fig. 4. ♂ HT (USNM) from Knoxville, Knox Co., Tennessee.

Nannaria ericacea Hoffman

Nannaria ericacea Hoffman, 1949, Proc. U. S. Nat. Mus., 99: 381, figs. 9, 10. ♂ HT (USNM) from Clifton Forge, Alleghany Co., Virginia.

Range: Known from Alleghany, Botetourt, Craig, Montgomery counties, central western Virginia.

Nannaria fowleri Chamberlin

Nannaria fowleri Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 29, fig. 14. ♂ HT (ANSP) from Jennings, Garrett Co., Maryland.

Nannaria cayugae Chamberlin, 1949, Proc. Biol. Soc. Washington, 62: 4, fig. 3. ♂ HT (USNM) from Ithaca, Tompkins Co., New York. Synonymized by Shelley, 1988.

Nannaria laminata Hoffman

Nannaria laminata Hoffman, 1949, Proc. U. S. Nat. Mus., 99: 383, figs. 11, 12. ♂ HT (USNM) from two miles southwest of Glen Lyn, Mercer Co., West Virginia.

Nannaria minor Chamberlin

Nannaria minor Chamberlin, 1918, Psyche, 25: 124. ♂ HT (MCZ) from Burbank, Carter Co., Tennessee. – Hoffman, 1964, Proc. Biol. Soc. Washington, 77: 33, figs. 5-7, 11.

Range: Known also from Madison Co., North Carolina.

Nannaria missouriensis (Chamberlin)

Mimuloria missouriensis Chamberlin, 1928, Ent. News, 39: 155. ♂ HT (USNM) from St. Charles, St. Charles Co., Missouri.

Nannaria morrisoni Hoffman

Nannaria morrisoni Hoffman, 1948, Journ. Washington Acad. Sci., 38: 348, figs. 3, 4. ♂ HT (USNM) from two miles west of Crozet, Albemarle Co., Virginia.

Range: Endemic in the central Blue Ridge, from Jefferson Co., West Virginia south to Rockbridge and Nelson counties, Virginia.

Nannaria oblonga (C. L. Koch)

Fontaria oblonga C. L. Koch, 1847, Syst. Myr., in Panzer: Krit. Rev. Insectf. Deutschl., 3: 175; 1863, Die Myriapoden, 1: 73, pl. 32, fig. 64. ♂ HT (ZMB) labeled only "Pensylvanien."

Nannaria ohionis Loomis & Hoffman

Fontaria castanea (nec McNeill, 1887) Williams & Hefner, 1928, Bull. Ohio Biol. Surv., 18: 106, fig. 9b.

Nannaria ohionis Loomis & Hoffman, 1948, Proc. Biol. Soc. Washington, 61: 53 [new name for *Fontaria castanea* sensu Williams & Hefner]. Specific type material not identified, only "Southern Ohio" was specified for "castanea". Neotype designation is mandated.

Nannaria rutherfordensis Shelley

Nannaria rutherfordensis Shelley, 1975, Proc. Biol. Soc. Washington, 88: 184, figs. 7-9. ♂ HT (USNM) from urban woodlot along U.S. 74, just west of junction with Bypass 74, Rutherfordton, Rutherford Co., North Carolina.

Nannaria scutellaria Causey

Nannaria scutellaria Causey, 1942, Ent. News, 53: 168, figs. 6, 7. ♂ HT (ANSP) from Chimneys, Great Smoky Mountains National Park, Sevier Co., Tennessee.

Nannaria shenandoah Hoffman

Nannaria shenandoah Hoffman, 1949, Proc. Biol. Soc. Washington, 62: 82, figs. 1-4. ♂ HT (USNM) from Shenandoah Mountain, Rockingham Co., Virginia.

Nannaria simplex Hoffman

Nannaria simplex Hoffman, 1949, Proc. U. S. Nat. Mus., 99: 384, figs. 13, 14. ♂ HT (USNM) from three miles northwest of Clifton Forge, Alleghany Co., Virginia.

Nannaria tennesseensis (Bollman)

Fontaria tennesseensis Bollman, 1889, Proc. U. S. Nat. Mus., 11: 340. HT (?USNM) from Mossy Creek [now Jefferson City], Jefferson Co., Tennessee.

Nannaria tennesseensis: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 42.

Nannaria terricola (Williams & Hefner)

Fontaria terricola Williams & Hefner, 1928, Bull. Ohio Biol. Surv., 18: 106, fig. 9c. ♂ HT (USNM) from an unspecified locality (probably Oxford) in Ohio.

Nannaria terricola: Loomis & Hoffman, 1948, Proc. Biol. Soc. Washington, 61: 53.

Nannaria wilsoni Hoffman

Nannaria wilsoni Hoffman, 1949, Proc. U. S. Nat. Mus., 99: 386, figs. 15, 16. ♂ HT (USNM) from vicinity of Mountain Lake Biological Station, Giles Co., Virginia.

Range: Known from Floyd, Giles, Montgomery, Patrick, and Roanoke counties, Virginia.

Genus **Oenomaea** Hoffman

Oenomaea Hoffman, 1964, Proc. Biol. Soc. Washington, 77: 27. Type species: *Fontaria pulchella* Bollman, 1887, by original designation.

One species, Tennessee.

Oenomaea pulchella (Bollman)

Fontaria pulchella Bollman, 1889, Proc. U. S. Nat. Mus. 11: 316. ♀ LT (USNM) from Strawberry Plains, Jefferson Co., Tennessee.

Oenomaea pulchella: Hoffman, 1964, Proc. Biol. Soc. Washington, 77: 29, figs. 1-4, 8-10.

Range: Recorded, perhaps dubiously, from Gordon Co., Georgia.

Tribe Pachydesmini Hoffman

Pachydesmini Hoffman, 1980, Classification of the Diplopoda, pp. 158, 187.

Three genera, southeastern United States.

For the present, I adopt the conclusions about the membership of this tribe presented by Shelley (1984), but with the reservation that alternative arrangements may be considered in the future.

Genus **Dicellarius** Chamberlin

Dicellarius Chamberlin, 1920, Proc. Biol. Soc. Washington, 33: 97. Type species: *Leptodesmus okefenokensis* Chamberlin, by original designation. – Shelley, 1984, Proc. Biol. Soc. Washington, 97: 473 (revision)

Spathoria Chamberlin, 1939, Bull. Univ. Utah, 30 (2): 6. Type species: *Fontaria lamellidens* Chamberlin, 1931, by original designation. Synonymized by Chamberlin & Hoffman, 1958.

Epeloria Chamberlin, 1939, Bull. Univ. Utah, 30 (2):: 3. Type species: *E. talapoosa* Chamberlin, by original designation. Synonymized by Hoffman, 1980.

Five species (two of them with subspecies), southeastern United States.

Dicellarius atlanta (Chamberlin)

Epeloria atlanta Chamberlin, 1946, Ent. News, 57: 151, fig. 6. ♂ HT (USNM) from Atlanta (perhaps that part in Fulton Co.], Georgia.

Dicellarius atlanta: Shelley, 1984, Proc. Biol. Soc. Washington, 97: 497, figs. 17-18.

Range: Western North Carolina (Graham Co.) south to central Georgia and extreme eastern Alabama (Lee Co.) (map, Shelley, 1984, fig. 29).

Dicellarius bimaculatus bimaculatus (McNeill)

Polydesmus bimaculatus McNeill, 1887, Proc. U. S. Nat. Mus., 10: 323, pl. 11, figs. 3-5. 18 ♂ and ♀ STs (USNM) from Pensacola, Escambia Co., Florida. ♂ lectotype designated by Shelley, 1984.

Spathoria bimaculata: Causey, 1955, Proc. Biol. Soc. Washington, 68: 24.

Dicellarius bimaculatus: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 30.

Dicellarius bimaculatus bimaculatus: Shelley, 1984, Proc. Biol. Soc. Washington, 97: 482.

Range: Extreme western end of Florida panhandle, adjacent southern Alabama, and north through central eastern Mississippi (map, Shelley, 1984, fig. 29).

Dicellarius bimaculatus fictus (Chamberlin)

Epeloria ficta Chamberlin, 1943, Proc. Biol. Soc. Washington, 56: 37, fig. 11. ♂ HT (FMNH) from Thomasville, Thomas Co., Georgia.

Epeloria dela Chamberlin, 1946, Proc. Biol. Soc. Washington, 59: 139, figs. 1, 2. ♂ HT (USNM) from Morgan, Calhoun Co., Georgia. Synonymized by Shelley, 1984.

Epeloria leiacantha Chamberlin, 1946, Proc. Biol. Soc. Washington, 59: 139, fig. 3. ♂ HT (USNM) from Spring Creek, Decatur Co., Georgia. Synonymized by Shelley, 1984.

Dicellarius bimaculatus fictus: Shelley, 1984, Proc. Biol. Soc. Washington, 97: 485, figs. 5-6.

Range: Western Florida, southern Alabama, and southwestern Georgia (with a disjunct record for Savannah, Georgia, which invites confirmation) (map, Shelley, 1984, fig. 29).

Dicellarius bimaculatus lamellidens (Chamberlin)

Fontaria lamellidens Chamberlin, 1931, Ent. News, 42: 78. Location of ♂ HT unknown, from Biloxi, Harrison Co., Mississippi.

Spathoria lamellidens: Chamberlin, 1939, Bull. Univ. Utah, 30(2): 6, fig. 9.

Dicellarius bimaculatus lamellidens: Shelley, 1984, Proc. Biol. Soc. Washington, 97: 485, figs. 5-6.

Range: Southern Mississippi (Stone, Jackson, and Harrison counties).

Dicellarius okefenokensis (Chamberlin)

Leptodesmus okefenokensis Chamberlin, 1918, Ann. Entom. Soc. America, 11: 370. ♂ HT (MCZ) from Billy's Island, Okefenokee Swamp, Charlton Co., Georgia.

Dicellarius okefenokensis: Chamberlin, 1920, Proc. Biol. Soc. Washington, 33: 97. – Shelley, 1984, Proc. Biol. Soc. Washington, 97: 490, figs. 9-12.

Epeloria nannodes Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 101, fig. 4. ♂ HT (USNM) from Gainesville, Alachua Co., Florida. Synonymized by Chamberlin & Hoffman, 1958.

Range: North central Florida, southeastern Georgia (map, Shelley, 1984, fig. 29).

Dicellarius sternolobus Loomis

Dicellarius sternolobus Loomis, 1969, Florida Entom., 52: 247, figs. 5-7. ♂ HT (USNM) from Alexander City, Tallapoosa Co., Alabama.– Shelley, 1984, Proc. Biol. Soc. Washington, 97: 500, figs. 19-23.

Range: Central Alabama (Shelby, Coosa, Talladega, and Tallapoosa counties) (map, Shelley, 1984, fig. 29).

Dicellarius talapoosa talapoosa (Chamberlin)

Epeloria talapoosa Chamberlin, 1939, Bull. Univ. Utah, 30(2): 3, fig. 1. ♂ HT (USNM) from Tallapoosa, Haralson Co., Georgia.

Dicellarius talapoosa talapoosa: Shelley, 1984, Proc. Biol. Soc. Washington, 97: 493, figs. 13-14.

Range: Piedmont region, west central Georgia and east central Alabama (map, Shelley, 1984, fig. 29).

Dicellarius talapoosa separandus Shelley

Dicellarius talapoosa separandus Shelley, 1984, Proc. Biol. Soc. Washington, 97: 497, figs. 15-16. ♂ HT (USNM) from Rickwood Caverns State Park, Blount Co., Alabama.

Range: North central Alabama (DeKalb, Morgan, Blount, Jefferson, and Tuscaloosa counties) (map, Shelley, 1984, fig. 29).

Genus **Pachydesmus** Cook

Pachydesmus Cook, 1895, Ann. New York Acad. Sci., 9: 5. Type species: *Polydesmus crassicutis* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 7; 1865, Trans. American Philos. Soc., 13: 224, fig. 55. – Hoffman, 1958, Proc. U. S. Nat. Mus., 108: 181 (revision).

Two species, one of them with eight subspecies, southeastern United States.

Pachydesmus clarus (Chamberlin)

Fontaria clara Chamberlin, 1918, Ann. Entom. Soc. America, 11: 372. ♂ HT (MCZ) from Creston, Natchitoches Parish, Louisiana.

Pachydesmus kisatchinsis Chamberlin, 1942, Bull. Univ. Utah, 32(8): 4, fig. 8. ♂ HT (USNM) from Kisatchi, Natchitoches Parish, Louisiana. Synonymized by Chamberlin & Hoffman, 1958.

Pachydesmus clarus: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 43. – Hoffman, 1958, Proc. U. S. Nat. Mus., 108: 190, figs. 1b, 6.

Range: Louisiana, eastern Texas (map, Hoffman, 1958, fig. 12).

Pachydesmus crassicutis crassicutis (Wood)

Polydesmus crassicutis Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 7; 1865, Trans. American Philos. Soc. 13: 224, fig. 55. ST (present status unknown) from "Mississippi" without further locality.

Pachydesmus crassicutis: Cook, 1895, Ann. New York Acad. Sci., 9: 5.

Fontaria louisiana Chamberlin, 1918, Canadian Entom, 50: 363. ♂ HT (apparently lost) from Covington, St. Tammany Par., Louisiana. Synonymized by Hoffman, 1958.

Pachydesmus simulans Chamberlin, 1942, Bull. Univ. Utah, 32(8): 4, figs. 9, 10. ♂ HT (USNM) from Gonzales, Ascension Par., Louisiana. Synonymized by Hoffman, 1958.

Pachydesmus crassicutis crassicutis: Hoffman, 1958, Proc. U. S. Nat. Mus., 108: 199, figs. 1a, 7a,, 8a, 9.

Range: Southern Louisiana, southern Mississippi (map, Hoffman, 1958, fig. 12).

Pachydesmus crassicutis denticulatus Chamberlin

Pachydesmus denticulatus Chamberlin, 1946, Ent. News, 57: 152, figs. 8, 9. ♂ HT (USNM) from Atlanta, Fulton Co., Georgia [?vicinity of Emory University].

Pachydesmus crassicutis denticulatus: Hoffman, 1958, Proc. U. S. Nat. Mus., 108: 205, figs, 7d, 8d.

Range: central and northern Georgia (map, Hoffman, 1958, fig. 122).

Pachydesmus crassicutis duplex Chamberlin

Pachydesmus duplex Chamberlin, 1939, Bull. Univ. Utah, 30(2): 5, fig. 8. ♂ HT (USNM) from Grenada, Grenada Co., Mississippi.

Pachydesmus crassicutis crassicutis: Hoffman, 1958, Proc. U. S. Nat. Mus., 108: 206, figs. 1d, 5e-f, 7b, 8b.

Range: Northern Mississippi, western Tennessee (map, Hoffman, 1958, fig. 12).

Pachydesmus crassicutis incursus Chamberlin

Pachydesmus incursus Chamberlin, 1939, Bull. Univ. Utah, 30(2): 5, fig. 7. ♂ HT (USNM) from Taylors, Greeneville Co., South Carolina.

Pachydesmus crassicutis incursus: Hoffman, 1958, Proc. U. S. Nat. Mus. 108: 207, figs. 7c, 8c. – Shelley & Filka, 1979, Brimleyana, 1: 147, figs. 1-10.

Range: South Carolina, extreme northeastern Georgia, Cleveland and Gaston counties, North Carolina (map, Shelley & Filka, 1979, fig. 10).

Pachydesmus crassicutis laticollis (Attems)

Fontaria laticollis Attems, 1899, Denks. Akad. Wiss. Wien, 68: 258, fig. 312. ♂ HT (ZMB) labeled only “Illinois.”

Pachydesmus laticollis: Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 189.

Pachydesmus crassicutis laticollis: Hoffman, 1958, Proc. U. S. Nat. Mus., 108: 208, figs. 5a-b, 10d, 11d.

Range: Cumberland Plateau, central Tennessee, northern Alabama (map, Hoffman, 1958, fig. 12).

Pachydesmus crassicutis hubrichti Hoffman

Pachydesmus crassicutis hubrichti Hoffman, 1958, Proc. U. S. Nat. Mus. 108: 210, figs. 5c-d, 10a, 11a. ♂ HT (USNM) from Tuscaloosa, Tuscaloosa Co., Alabama.

Range: Central western Alabama (map, Hoffman, 1958, fig. 12).

Pachydesmus crassicutis retrorsus Chamberlin

Pachydesmus retrorsus Chamberlin, 1921, Canadian Entom., 53: 231, figs. 3, 4. ♂ HT (MCZ) from Knox County, Tennessee.

Pachydesmus crassicutis retrorsus: Hoffman, 1958, Proc. U. S. Nat. Mus., 108: 213, figs. 1c, 10b, 11b.

Range: Eastern Tennessee, north central Alabama (map, Hoffman, 1958, fig. 12).

Pachydesmus crassicutis adsinicolus Hoffman

Pachydesmus crassicutis adsinicolus Hoffman, 1958, Proc. U. S. Nat. Mus., 108: 215, figs. 10c, 11c. ♂ HT (USNM) from Mobile, Mobile Co., Alabama.

Genus **Thrinaxoria** Chamberlin & Hoffman

Thrinaxoria Chamberlin & Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 71: 4. Type species: *Fontaria lampra* Chamberlin, 1918, by original designation.

Two species, southeastern United States.

Thrinaxoria bifida (Wood)

Polydesmus bifidus Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, 16: 7; 1865, Trans. American Philos. Soc., 13: 223, fig. 52. Type material apparently lost, originating from "Georgia and Texas". NT ♂ (USNM) from 0.2 miles northeast of Parksville, Polk Co., Tennessee, designated by Shelley, 1984.

Epeloria bifida: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 32.

Thrinaxoria bifida: Shelley, 1984, Proc. Biol. Soc. Washington, 97: 506, figs. 27-28.

Range: Northern Georgia, adjacent parts of Teneesee and North Carolina (map, Shelley, 1984, fig. 29).

Thrinaxoria lampra (Chamberlin)

Fontaria lampra Chamberlin, 1918, Ann. Entom. Soc. America, 11: 371. ♂ HT apparently lost, ♂ PT (MCZ) from Creston, Natchitoches Par., Louisiana.

Zinaria aberrans Chamberlin, 1942, Bull. Univ. Utah, 32(8): 4, fig. 7. ♂ HT (USNM) from five miles northwest of Shreveport, Caddo Par., Louisiana.

Thrinaxoria lampra: Chamberlin & Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 71: 4.– Shelley, 1984, Proc. Biol. Soc. Washington, 97: 504, figs. 24-26.

Range: Northwestern parishes of Louisiana, adjacent eastern Texas, western Tennessee, northern Mississippi, northwestern Alabama (map, Shelley, 1984, fig. 29).

Tribe Sigmocheirini Causey

Sigmocheiridae Causey, 1955, Proc. Biol. Soc. Washington, 68: 93.

Sigmocheirini: Hoffman, 1980, Classification of the Diplopoda, p. 157. – Shelley, 1995, Entom. Scandinavica, 26: 343 (revision).

Two genera, central California.

Genus **Ochthocelata** Shelley

Ochthocelata Shelley, 1995, Entom. Scandinavica, 26: 355. Type species: *O. adynata* Shelley, by original designation.

One species, southern California.

Ochthocelata adynata Shelley

Ochthocelata adynata Shelley, 1995, Entom. Scandinavica, 26: 357, figs. 22-27. ♂ HT (USNM) from four miles east off Glenville, Kern Co., California.

Genus **Sigmocheir** Chamberlin

Sigmocheir Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc., 87: 4. Type species: *S. calaveras* Chamberlin, by original designation. – Shelley, 1995, Entom. Scandinavica, 26: 343 (revision).

Tuolumnia Chamberlin, 1953, Proc. Biol. Soc. Washington, 66: 67. Type species: *Sigmocheir danehyi* Chamberlin, 1953, by monotypy. Synonymized (as subgenus) with *Sigmocheir* by Buckett, 1964, and (as strict synonym) by Hoffman, 1980.

Three species: California.

The curious circumstances involving the proposal and typification of *Tuolumnia* are recounted in detail by Shelley (1995: 341).

Sigmocheir calaveras Chamberlin

Sigmocheir calaveras Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc., 87: 5, figs. 10-11. ♂ HT (USNM) from Crystal-Stanislaus Cave, ca. three miles west of Columbia, Calaveras Co., California. – Shelley, 1995, Entom. Scandinavica, 26: 345, figs. 1-10.

Sigmocheir dohenyi [sic!] Chamberlin, 1953, Ent. News, 64: 93. Location of type material (if extant) unknown, and indications of type locality contradictory. Synonymized by Shelley, 1995.

Tuolumnia danehyi: Chamberlin, 1953, Proc. Biol. Soc. Washington, 66: 67, fig. 1.

Range: Sierra Nevada Mountains in central California (Calaveras, Mariposa, and Tuolumne counties) (map, Shelley, 1995, fig. 28).

Sigmocheir furcata Shelley

Sigmocheir furcata Shelley, 1995, Entom. Scandinavica, 26: 352, figs. 17-21. ♂ HT (FSCA) from Williams Cave, ca. one mile north of Murphys, Calaveras Co., California.

Range: Sierra Nevada mountains in central California (Amador, Calaveras, El Dorado, and Placer counties) (map, Shelley, 1995, fig. 28).

Sigmocheir maculifer (Chamberlin)

Paimokia maculifer Chamberlin, 1941, Bull. Univ. Utah, 31(12): 14. ♀ HT (USNM) from site nine miles north of Woodlake, Tulare Co., California.

Harpaphe maculifer: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 35.

Sigmocheir maculifer: Shelley, 1995, Entom. Scandinavica, 26: 351, figs. 11-16.

Range: Sierra Nevada mountains in south-central California (Fresno and Tulare counties) (map, Shelley, 1995, fig. 28).

Tribe Xystocheirini Cook

Xystocheirini Hoffman, 1980, Classification of the Diplopoda, p. 156, 187.

Five genera, western United States.

Genus **Anombrocheir** Buckett & Gardner

Anombrocheir Buckett & Gardner, 1969, Ent. News, 80: 69. Type species: *A. spinosa* Buckett & Gardner, by original designation.

Two species, inner Coast Ranges, northern California.

Anombrocheir bifurcata Gardner & Buckett

Anombrocheir bifurcata Gardner & Buckett, 1969, Ent. News, 80: 295. ♂ HT (UCD) from 8.5 miles northwest of Rumsey, in Colusa Co., California.

Range: Adjoining areas in Colusa and Yolo counties, California (map, Buckett & Gardner, 1969).

Anombrocheir spinosa Buckett & Gardner

Anombrocheir spinosa Buckett & Gardner, 1969, Ent. News, 80: 70, figs. 1-4. ♂ HT (UCD) from, California.

Genus **Motyxia** Chamberlin

Motyxia Chamberlin, 1941, Bull. Univ. Utah, 31(12): 15. Type species: *M. kerna* Chamberlin, by original designation. – Shelley, 1997, Insecta Mundi, 11: 335 (revision).

Amplocheir Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 97. Type species: *Xystocheir sequoia* Chamberlin, 1941, by original designation. Synonymized by Causey & Tiemann, 1969.

Luminodesmus Loomis & Davenport, 1951, Journ. Washington Acad. Sci., 41: 270. Type species: *L. sequoiae* Loomis & Davenport, by original designation. Synonymized by Causey & Tiemann, 1969.

Eight species, two of them with named geographic races, southern California.

Motyxia kerna Chamberlin

Motyxia kerna Chamberlin, 1941, Bull. Univ. Utah, 31(12): 15, fig. 29. ♂ HT (USNM) from seven miles north of Glenville, Kern Co., California – Shelley, 1997, Insecta Mundi, 11: 338, figs. 9-12.

Range: Adjacent areas in Kern and Tulare counties, California (maps, Causey & Tiemann, 1969; Shelley, 1997, fig. 1).

The original published type locality ("California: Kern Co., 12 miles northeast of Hammond") was incorrect, and corrected by Causey & Tiemann on the basis of information furnished *in litt.* by Professor Chamberlin.

Motyxia monica Chamberlin

Motyxia monica Chamberlin, 1944, Proc. Biol. Soc. Washington, 57: 113, figs. 1-3. ♂ HT (USNM) from Madelia Canyon in the Santa Monica Mountains, Sherman Oaks, Los Angeles Co., California. – Shelley, 1997, Insecta Mundi, 11: 337, figs. 3-8.

Motyxia tejona Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 25, fig. 4. ♂ HT (ANSP?) from Fort Tejon, Kern Co., California. Synonymized by Shelley, 1997.

Motyxia expansa Loomis, 1953, Journ. Washington Acad. Sci., 43: 422, fig. 19. ♂ HT (USNM) from Fort Tejon, Kern Co., California. Synonymized by Shelley, 1997.

Motyxia exilis Loomis, 1953, Journ. Washington Acad. Sci., 43: 422, fig. 20. ♂ HT (USNM) from Woodford, near Tehachapi, Kern Co., California. Synonymized by Shelley, 1997.

Motyxia dissecta (nec *Polydesmus dissectus* Wood, 1867) Causey & Tiemann, 1969, Proc. American Philos. Soc., 113: 21, figs. 2-3, 8, 10-12.

Range: south-central region of Kern Co., and an apparently disjunct area in southwestern Los Angeles Co., California (map, Shelley, 1997, fig. 2).

Motyxia pior Chamberlin

Motyxia pior Chamberlin, 1941, Bull. Univ. Utah, 31(12): 16. F HT (USNM) from 12 miles northeast of Hammond, Tulare Co., California. – Shelley, 1997, Insecta Mundi, 11: 346, figs. 32-35.

[*Motyxia pior* "form" *secca* Causey & Tiemann, 1969, Proc. American Philos. Soc., 113: 27, figs. 15-16. Invalidly proposed for a minor variant and without standing in nomenclature.]

Range: Northcentral Tulare Co., California (maps, Causey & Tiemann, 1969, fig. 1; Shelley, 1997, fig. 2).

Motyxia porrecta Causey & Tiemann

Motyxia porrecta Causey & Tiemann, 1969, Proc. American Philos. Soc., 113: 27, figs. 7, 21-22. ♂ HT (FSCA) from Kern River canyon at county picnic site, Kern Co., California. – Shelley, 1997, Insecta Mundi, 11: 347, figs. 40-42.

Range: Greenhorn Mountains in central western Kern Co., California (maps, Causey & Tiemann, 1969, fig. 1; Shelley, 1997, fig. 2).

Motyxia sequoia sequoia (Chamberlin)

Xystocheir sequoia Chamberlin, 1941, Bull. Univ. Utah, 31(12): 15, fig. 28. ♂ HT (USNM) from ten miles east of Hammond, Tulare Co., California.

Amplocheir sequoia: Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 97, figs. 12-13.

Motyxia sequoia: Causey & Tiemann, 1970, Bull. Mus. Nat. Hist. Natur., (2) 41: 35.

Motyxia sequoia sequoia: Causey & Tiemann, 1969, Proc. American Philos. Soc., 113: 30, figs. 31-32. – Shelley, 1997, Insecta Mundi, 11: 342, figs. 25-27.

Range: East Fork Kaweah River, in the vicinity of Hammond, Tulare Co., California (map, Causey & Tiemann, 1969, fig. 1).

Motyxia sequoia alia Causey & Tiemann

Motyxia sequoia alia Causey & Tiemann, 1969, Proc. American Philos. Soc., 113: 29, figs. 5, 29-30. ♂ HT (FSCA) from a site along highway 198 at Horseshoe Creek, southeast of Lake Kaweah, Tulare Co., California. – Shelley, 1997, Insecta Mundi, 11: 344, figs. 28-29.

Range: central Tulare Co., California (map, Shelley, 1997, fig. 2).

Motyxia sequoiae (Loomis & Davenport)

Luminodesmus sequoiae Loomis & Davenport, 1951, Journ. Washington Acad. Sci., 41: 271, fig. 1 ♂ HT (USNM) from a site above Camp Nelson, Sequoia National Forest, Tulare Co., Californa.

Xystodesmus sequoiae: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 54.

Motyxia sequoiae: Causey & Tiemann, 1969, Proc. American Philos. Soc., 113: 31, figs. 17-18. – Shelley, 1997, Insecta Mundi, 11: 338, figs. 13-16.

Range: Headwaters of the Middle Fork, Tule River, Tulare Co., California (map, Causey & Tiemann, 1969, fig. 1).

Motyxia tularea tularea (Chamberlin)

Xystocheir tularea Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 101, fig. 27. ♂ HT (USNM) from Sugarloaf Mountain, Tulare Co., California.

Motyxia tularea: Causey & Tiemann, 1969, Proc. American Philos. Soc., 113: 32, figs. 25-26.

Motyxia tularea tularea: Shelley, 1997, Insecta Mundi, 11: 340, figs. 17-20.

Range: Southcentral Tulare Co., California (map, Shelley, 1997, fig. 2).

Motyxia tularea ollae Causey & Tiemann

Motyxia sequoia ollae Causey & Tiemann, 1969, Proc. American Philos. Soc., 113: 29, figs. 6, 27-28. ♂ HT (FSCA) from 5.4 miles west of the Tule River Indian Reservation, Tulare Co., California.

Motyxia tularea ollae: Shelley, 1997, Insecta Mundi, 11: 341, figs. 21-24.

Range: Along the North Fork of the Tule River, Tulare Co., California (map, Shelley, 1997, fig. 2).

Genus **Parcipromus** Shelley

Parcipromus Shelley, 1995, Myriapodologica, 3: 55. Type species: *P. tiemanni* Shelley, by original designation.

Three species, Sierra Nevada mountains, California.

Parcipromus cooki (Causey)

Xystocheir cooki Causey, 1995, Proc. Biol. Soc. Washington, 68: 91, fig. 3. All type material [from Redwood Canyon, Sequoia National Park, Tulare Co., California] lost, not at AMNH nor other collections. ♂ NT (CAS) designated by Shelley (1995) from Kings River Canyon, Fresno Co., California.

Parcipromus cooki: Shelley, 1995, Myriapodologica, 3: 65, figs. 19-27.

Range: Eastern Fresno and Tulare counties, California (map, Shelley 1995, fig. 2).

Parcipromus gigantoarboricolus Shelley

Parcipromus gigantoarboricolus Shelley, 1995, Myriapodologica, 3: 63. Figs. 15-18. ♂ HT (FSCA) from a site along General's Highway at southern edge of Giant Forest, Sequoia National Park, Tulare Co., California.

Range: Known only from several sites adjacent to the type locality (map, Shelley, 1995, fig. 2).

Parcipromus tiemanni Shelley

Parcipromus tiemanni Shelley, 1995, Myriapodologica, 3: 59, figs. 3-14. ♂ HT (FSCA) from Redwood Meadows Campground, Sequoia National Park, ca. 11.1 miles south of Camp Nelson, Tulare Co., California.

Range: Six localities in eastern Tulare Co., California (map, Shelley, 1995, fig. 2).

Genus **Wamokia** Chamberlin

Wamokia Chamberlin, 1941, Bull. Univ. Utah, 31(12): 14. Type species: *W. placera* Chamberlin, by original designation. – Buckett & Gardner, 1968, Proc. Biol. Soc. Washington, 81: 511 (revision).

Eight species, California.

Wamokia dentata Buckett & Gardner

Wamokia dentata Buckett & Gardner, 1968, Proc. Biol. Soc. Washington, 81: 533, figs. 13, 14, 23. ♂ HT (UCD) from three miles northwest of Somerset, El Dorado Co., California.

Wamokia discordis Buckett & Gardner

Wakomia discordis Buckett & Gardner, 1968, Proc. Biol. Soc. Washington, 81: 522, figs. 11, 12, 18, 28. ♂ HT (UCD) from one mile east of Auburn, Placer Co., California.

Range: Placer and El Dorado counties, California (map, Buckett & Gardner, 1968, fig. 2).

Wamokia falcata Buckett & Gardner

Wamokia falcata Buckett & Gardner, 1968, Proc. Biol. Soc. Washington, 81: 534, figs. 7, 8, 30. ♂ HT (UCD) from Camino, El Dorado Co., California.

Wamokia hoffmani Buckett & Gardner

Wamokia hoffmani Buckett & Gardner, 1968, Proc. Biol. Soc. Washington, 81: 528, figs. 21, 22, 27. ♂ HT (UCD) from one mile north of Shingle Springs, El Dorado Co., California.

Range: El Dorado and Amador counties, California (map, Buckett & Gardner, 1968, fig. 2).

Wamokia placera Chamberlin

Wamokia placera Chamberlin, 1941, Bull. Univ. Utah, 31(12): 14, fig. 27. ♂ HT (USNM) from nine miles north of Placerville, El Dorado Co., California. – Buckett & Gardner, 1968, Proc. Biol. Soc. Washington, 81: 530, figs. 3, 4, 9, 10, 24, 26.

Range: Central-western El Dorado Co., California (map, Buckett & Gardner, 1968, fig. 2).

Wamokia remota Buckett & Gardner

Wamokia remota Buckett & Gardner, 1968, Proc. Biol. Soc. Washington, 81: 535, figs. 15-17, 25. ♂ HT (UCD) from eight miles northeast of Auburn, Placer Co., California.

Range: Two localities in central Placer Co., California (map, Buckett & Gardner, 1968, fig. 2).

Wamokia sierrae Buckett & Gardner

Wamokia sierrae Buckett & Gardner, 1968, Proc Biol. Soc. Washington, 81: 537, figs. 19, 20, 29. ♂ HT (UCD) from one mile southwest of Grass Valley., Nevada Co., California.

Genus **Xystocheir** Cook

Xystocheir Cook, 1904, Harriman Alaska Exped., 8: 53. Type species: *X. obtusa* Cook, by original designation. – Shelley, 1996, Canadian Journ. Zool., 74: 1336 (revision).

Paimokia Chamberlin, 1941, Bull. Univ. Utah, 31(12): 13. Type species: *P. modestior* Chamberlin, by original designation. Synonymized by Shelley, 1996.

Cheirauxus Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 97. Type species: *C. sapiens* Chamberlin, by original designation. Synonymized by Hoffman, 1980.

Delocheir Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 99. Type species: *Xystocheir taibona* Chamberlin, 1912, by original designation. Synonymized by Hoffman, 1980.

Nine species, three of them with subspecies, California. These taxa are organized into four species-groups by Shelley (1996).

Members of this genus appear to be undergoing extensive local evolution in gonopod structure, especially *X. dissecta,* which ". . .demonstrates.all stages of the speciation process, species, semispecies, subspecies, and undefinable intergrades. . ." in the opinion of the authority on this group (Shelley, 1996: 1341).

Xystocheir bistipita Shelley

Xystocheir bistipita Shelley, 1996, Canadian Journ. Zool., 74: 1354, figs. 49, 50. ♂ HT (UCD) from one mile north of San Luis Obispo, San Luis Obispo Co., California.

Xystocheir brachymacris Shelley

Xystocheir brachymacris Shelley, 1996, Canadian Journ. Zool., 74: 1353, figs. 39-41. ♂ HT (USNM) from one miles northeast of Pacific House, El Dorado Co., California.

Range: Three localities in El Dorado Co., California.

Xystocheir dissecta dissecta (Wood)

Polydesmus dissectus Wood, 1867, Proc. Acad. Nat. Sci. Philadelphia, 19: 129. ♂ LT (ANSP) from an unknown locality in California, deduced by Shelley (1996: 1341) to be either San Francisco or San Jose; the published locality "Fort Tejon" is manifestly an error.

Polydesmus (Fontaria) furcifer Karsch, 1881, Arch. Naturgesch. 47: 39, pl. 3, fig. 12. ♂ HT (ZMB) from "California", without further locality. Synonymized by Attems, 1938.

Xystocheir dissecta: Cook, 1904, Harriman Alaska Exped., 8: 55.

Xystocheir obtusa: Cook, 1904, Harriman Alaska Exped., 8: 53, pl. III, figs. 1a-c. ♂ HT (USNM) from unknown locality in California. Synonymized by Attems, 1938.

Xystocheir acuta Cook, 1904, Harriman Alaska Exped., 8: 54. ♂ HT (USNM) from unspecified locality in California, thought by Cook to be probably vicinity of Palo Alto, Santa Clara County. Synonymized by Shelley, 1996.

Cheirauxus sapiens Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 97, figs. 14, 15. ♂ HT (USNM) from Palo Alto, Santa Clara Co., California. Synonymized by Shelley, 1996.

Xystocheir francisca Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 99, fig. 20. ♂ HT (USNM) from San Francisco, California. Synonymized by Shelley, 1996.

Xystocheir milpitas Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 99, figs. 21, 22. ♂ HT (USNM) from Milpitas, Santa Clara Co., California. Synonymized by Shelley, 1996.

Range: Vicinity of San Francisco Bay, California (Alameda, Contra Costa, Marin, San Mateo, Santa Clara, and Sonoma counties), intergrading extensively north and east with adjacent subspecies (map, Shelley, 1996, fig. 73).

Xystocheir dissecta microrama Shelley

Xystocheir dissecta microrama Shelley, 1996, Canadian Journ. Zool., 74: 1345, figs. 18-20. ♂ HT (UCD) from two miles west of Cordelia, Solano Co., California.

Range: Hills east of San Francisco Bay area (Alameda, Contra Costa, Sacramento, Solano counties) (map, Shelley, 1996, fig. 73).

Xystocheir dissecta taibona Chamberlin

Xystocheir taibona Chamberlin, 1912, Ann. Entom. Soc. America, 5: 170, pl. 10, figs. 1, 2. ♂ HT (USNM) from Pacific Grove, Monterey Co., California.

Delocheir taibona: Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 99, figs. 16, 17.

Delocheir conservata: Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 99, fig. 18. ♂ HT (USNM) from the Hastings Reservation, Monterey Co., California. Synonymized by Shelley, 1996.

Delocheir dalea Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 99, fig. 19. ♂ HT (USNM) from Brookdale, Santa Clara Co., California. Synonymized by Shelley, 1996.

Xystocheir dissecta taibona: Shelley, 1996, Canadian Journ. Zool., 74: 1345, figs. 13-17.

Range: Coastal ranges of California south of San Francisco Bay (Monterey, San Benito, Santa Clara, Santa Cruz counties) (map, Shelley, 1996, fig. 73).

Xystocheir modestior modestior (Chamberlin)

Paimokia modestior Chamberlin, 1941, Bull. Univ. Utah, 31(12): 13, fig. 25. ♂ HT lost, 2 FF PT (USNM) from 4-7 miles north of Badger, Fresno-Tulare counties, California.

Harpaphe modestior: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 35.

Xystocheir modestior modestior: Shelley, 1996, Canadian Journ. Zool., 74: 1357, figs. 51-56.

Range: Sierra Nevada mountains in Madera, Fresno, and Tulare counties, California (map, Shelley, 1996, fig. 73).

Xystocheir modestior haerens Shelley

Xystocheir modestior haerens Shelley, 1996, Canadian Journ. Zool., 74: 1358, figs. 57-61. ♂ HT (USNM) from site along Hwy. 180, one mile east jct. Hwy. 63 (ca. 28 miles east of Fresno), Fresno Co., California.

Range: Vicinity of Squaw Valley, Fresno Co., California (map, Shelley, 1996, fig. 73).

Xystocheir prolixorama Shelley

Xystocheir prolixorama Shelley, 1996, Canadian Journ. Zool., 74: 1348, figs. 24-27. ♂ HT (UCD) from five miles east of Cloverdale, Mendocino Co., California.

Xystocheir reducta (Causey)

Amplocheir reducta Causey, 1955, Proc. Biol. Soc. Washington, 68: 92, fig. 4.Original type material (specified "AMNH" but not received there and presumed lost), from 0.6- 0.7 miles northeast of Briceburg, Mariposa Co., California. Near-topotypic ♂ NT (UCD) from 2.1 miles east of Briceburg designated by Shelley, 1996: 1351.

Xystocheir reducta: Shelley, 1996, Canadian Journ. Zool., 74: 1351, figs. 32-38.

Range: Sierra Nevada and adjoining foothills in Amador, Tuolumne, and Mariposa counties, California (map, Shelley, 1996, fig. 73).

Xystocheir solenofurcata Shelley

Xystocheir solenofurcata Shelley, 1996, Canadian Journ. Zool. 74: 1348, figs. 28-31. ♂ HT (UCD) from two miles north of Plymouth, Amador Co., California.

Range: Apparently confined to central and western Amador County, California (map, Shelley, 1996, fig. 73).

Xystocheir stenomacris Shelley

Xystocheir stenomacris Shelley, 1996, Canadian Journ. Zool., 74: 42-48. ♂ HT (UCD) from 15 miles north of Ahwahnee, Mariposa Co., California.

Range: Apparently confined to central Mariposa Co., California (map, Shelley, 1996, fig. 73).

Xystocheir stolonifera stolonifera Shelley

Xystocheir stolonifera stolonifera Shelley, 1996, Canadian Journ. Zool., 74: 1358, figs. 62-66. ♂ HT (FSCA) from two miles south of Tollhouse, Hwy. 168, Fresno Co., California.

Range: Sierra Nevada foothills in eastern Fresno Co., California.

Xystocheir stolonifera uncinata Shelley

Xystocheir stolonifera uncinata Shelley, 1996, Canadian Journ. Zool., 74: 1369, figs. 67-69. ♂ HT (UCD) from three miles south of Coarsegold, Madera Co., California.

Range: Sierra Nevada foothills in eastern Fresno and Madera counties, California (map, Shelley, 1996, fig. 73).

Family Aphelidesmidae Brolemann

Trachelorhachidae Silvestri, 1898, Boll. Mus. Zool. Anat. Comp. Torino, 13(324): 5. Based on *Trachelorhachis* Silvestri, 1898, a preoccupied generic name.

Aphelidesminae Brolemann, 1916, Ann. Soc. Entom. France, 84: 550 (in part).

Aphelidesminae + Amplininae: Hoffman, 1954, Journ. Washington Acad. Sci., 44: 57.

Aphelidesmini + Amplinini: Hoffman, 1980, Classification of the Diplopoda, p. 164.

Aphelidesmidae: Hoffman, 1998, Myriapodologica, 5: 135.

Subfamily Amplininae Hoffman

Euryurini (in part) Brolemann, 1916, Ann. Soc. Entom. France, 84: 550.

Amplininae Hoffman, 1954, Journ. Washington Acad. Sci., 44: 57; 1998, Myriapodologica, 5: 136.

Amplininae Vohland, 1999, Amazoniana, 15: 129-163 (revision of subfamily at generic level).

14 genera, Mexico to Guyana, Peru, and western Brazil.

This taxon is interesting for its inclusion of both monotypic genera (e.g., *Meridiurus, Colomborus*) and others which are extremely speciose (*Amplinus* in Central America, *Pycnotropis* in the Amazon basin). An adequate distinction between *Amplinus* and *Polylepiscus* remains to be discovered.

Genus **Amplinus** Attems

Amplinus Attems, 1898, Denkschr. Akad. Wiss., Wien, 67: 264. Type species: *Polydesmus Klugii* Brandt, 1839, by subsequent designation of Attems, 1938. – Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 148. – Jeekel, 1971. Monogr. Nederl. Ent. Ver., 5: 247. – Hoffman, 1976, Revue suisse Zool., 83: 40 (note on typification of this name).

Orthomorpha (non sensu Bollman, 1893) Cook, 1911, Proc. U. S. Nat. Mus. 40: 627. Type species: *Polydesmus Klugii* Brandt, 1839.

Pseudamplinus Hoffman, 1954, Journ. Washington Acad. Sci., 44: 51. Type species: *Amplinus orphnius* Chamberlin, 1922, by original designation. – Loomis, 1968, Bull. U. S. Nat. Mus. 266: 23. Synonymized by Hoffman, 1976.

28 species, southern Mexico to Costa Rica. Several species from Venezuela placed in this genus in the past are probably referable to some other taxon.

Amplinus areatus Pocock

Amplinus areatus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 151, pl. XI, figs. 4-4f. ♂ HT (location unknown) from "La Tortuga" at Retalhuleu, Prov. Retalhuleu, Guatemala.

Amplinus armatus Pocock

Amplinus armatus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 153, pl. XI, figs. 6-6b. ♂ HT (location unknown) from "Mexico" without further data.

Range: Two specimens (VMNH) from near Valle Nacional, Oaxaca, agree very closely with Pocock's detailed account and if conspecific with the lost type provide the only known locality for this species.

Amplinus bitumidus (Loomis), new combination.

Pseudamplinus bitumidus Loomis, 1969, An. Inst. Biol. Univ. Nac. Mexico, Zool. 40: 49, fig. 1. ♂ HT (USNM) from Estacíon Biológica Los Tuxtlas, at San Andrés Tuxtla, Veracruz, Mexico.

Amplinus constrictus Chamberlin

Amplinus constrictus Chamberlin, 1953, Proc. Biol. Soc. Washington, 66: 67, fig. 2. ♂ HT (FMNH) from "west of San Pedro Sula", Prov.Cortes, Honduras.

Amplinus convexus Carl

Pachyurus convexus Carl, 1902, Revue suisse Zool., 10: 633, fig. 57. ♂ HT (MHNG) from "Costa Rica" without further details.

Amplinus convexus: Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 150.

Range: Recorded from Parismina (Chamberlin, 1933), and Cairo and Guápiles (Loomis, 1972), all Prov. Limón, Costa Rica.

Amplinus erichsonii (Brandt)

Polydesmus Erichsonii Brandt, 1839, Bull. Sci. Acad. Sci. St. Petersbourg, 5: 315. ♂ HT (ZMB) from "Mexico" without further data; 1841, Rec. Mem., p. 133.

Amplinus erichsonii: Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 152. – Hoffman, 1983, Deutsch. Entom. Zeitschr. NF, 30: 34, figs. 2-4 (description of holotype).

Orthomorpha erichsonii: Cook, 1911, Proc. U. S. Nat. Mus., 40: 628.

Pseudamplinus erichsonii: Hoffman, 1954, Journ. Washington Acad. Sci., 44: 51.

Amplinus flavicornis Pocock

Amplinus flavicornis Pocock, 19098, Biol. Centr.-Amer., Diplopoda, p. 151, pl. XI, figs. 2-2f. ♂ HT (location uncertain) from "Central America" without further data.

Range: Specimens (VMNH) from Palenque, Chiapas, agree closely with the original description; if conspecific provide the only known locality for this species.

Amplinus intermittens Causey

Amplinus intermittens Causey, 1954, Proc. Biol. Soc. Washington, 67: 64, figs. 21, 22. ♂ HT (INHS) from 15 miles south of Pichucalco, Chiapas, Mexico. – Hoffman, 1976, Revue suisse Zool., 83: 44.

Amplinus klugii (Brandt)

Polydesmus Klugii Brandt, 1839, Bull. Sci. Acad. Sci. St. Petersbourg, 5: 313. ♂ HT (ZMB) from "...urbe Alvarado regni Mexicani..." (=Alvarado, Veracruz); 1841, Rec. Mem. p. 133.

Pachyurus (Amplinus) klugii: Attems, 1898, Denkschr. Akad. Wiss. Wien, 68: 284.

Amplinus klugi: Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 152 (combination only, not specimens described and figured, see entry for *A. pococki* Cook).

Amplinus klugii: Attems, 1938, Das Tierreich, 69: 308.– Hoffman, 1983, Deutsch. Entom. Zeitschr., NF 30: 32, fig. 1 (redescription of type specimen).

Pseudamplinus klugii: Hoffman, 1954, Journ. Washington Acad. Sci., 44: 51.

Range: Known definitely only from southern Veracruz; records for other parts of Mexico require confirmation.

Amplinus leon Chamberlin

Amplinus leon Chamberlin, 1952, Ann. Entom. Soc. America, 45: 574, fig. 37. ♂ HT (FMNH) from Monterey, Nuevo León, Mexico.

Monterey is so far from the nearest genuine locality for this genus, as well as being decidedly non-tropical, that the accuracy of the stipulated type locality must be held in suspicion.

Amplinus manni Chamberlin

Amplinus manni Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 41, pl. 16, figs. 5-7. ♂ HT (USNM) from La Ceiba, Prov. Atlantida, Honduras.

Amplinus mimus Chamberlin

Amplinus mimus Chamberlin, 1953, Proc. Biol. Soc. Washington, 66: 68. ♂ HT (FMNH) from "camp west of San Pedro Sula", Prov. Cortes, Honduras.

How this nominal species differs from either *A. orphnius* or *A. manni,* described from the same region, was neither specified nor evident from the published descriptions.

Amplinus niteus Chamberlin

Amplinus niteus Chamberlin, 1922, Proc. U. S. Nat. Mus. 60(8): 43, pl. 16, fig. 9. ♂ HT (USNM) from "basin of San Juan River", either Alajuela or Heredia province, Costa Rica.

Amplinus nitidus (Brolemann)

Platyrrhacus nitidus Brolemann, 1900, Mém. Soc. zool. France, 13: 97, figs. 18-20. ♂ HT (MHNP) from "Guatemala", without further details.

Amplinus nitidus: Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 149, pl. 11, fig. 3.

Amplinus orphnius Chamberlin

Amplinus orphnius Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 42, pl. 16, fig. 8. ♂ HT (USNM) from La Ceiba, Prov. Atlantida, Honduras.

Pseudamplinus orphinus [sic!]: Hoffman, 1954, Journ. Washington Acad. Sci., 44: 51.

Range: Recorded from Belize, eastern Guatemala, and the north coast of Honduras.

Amplinus palicaudatus (Attems)

Pachyurus palicaudatus Attems, 1901, Mitt. Zool. Mus. Hamburg, 18: 98, pl. 50, fig. 8. ST (ZMH) from La Joya, Chiapas, Mexico.

Amplinus palicaudatus: Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 150, pl. XI, figs. 1-1e. – Hoffman, 1976, Revue Suisse Zool., 83: 43, figs. 4, 5 (designation and illustration of lectotype).

Range: Highlands of Chiapas and adjacent Guatemala.

Amplinus permundus Hoffman

Amplinus palicaudatus (nec Attems 1901): Kraus, 1954, Senckenb. Biol., 35: 311.

Amplinus permundus Hoffman, 1976, Revue suisse Zool., 83: 40, figs. 1-3. ♂ HT (MHNG) from Hacienda Los Plaines de Montecristo, near Metapan, Dept. Santa Ana, El Salvador.

Range: Uplands of extreme northern El Salvador, doubtless adjacent parts of Honduras and Guatemala.

Amplinus pococki (Cook)

Amplinus klugii (nec Brandt 1839) Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 152, pl. 11, figs. 5-5e (reference to specimen from Jalapa, Veracruz, only).

Orthomorpha pococki Cook, 1911, Proc. U. S. Nat. Mus., 40: 428. ♂ HT (location uncertain, formerly BMNH) from Jalapa, Veracruz, Mexico.

Amplinus crenus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 56, fig. 136. ♂ HT (USNM) from "near Fortin", Veracruz, Mexico. Synonymized by Hoffman, 1983.

Amplinus eutypus Chamberlin, 1952, Ann. Entom. Soc. America, 45: 573. ♀♀ ST (FMNH) from El Fortin [de las Flores], Veracruz, Mexico. Synonymized by Hoffman, 1983.

[*Amplinus fortinus* Chamberlin, 1952, Ann. Entom. Soc. America, 45: 575, in caption for fig. 36. Invalidly proposed name, apparently a predecessor of *eutypus* and apparently based on the same type material].

Pseudamplinus pococki + eutypus + crenus: Hoffman, 1954, Journ. Washington Acad. Sci., 44: 51.

Amplinus pococki: Hoffman, 1983, Deutsch. Entom. Zeitschr. NF 30: 34, fig. 5.

Range: Southern lowlands of Veracruz, Mexico.

The possible applicability of the name *picteti* to this species should not be overlooked.

Amplinus schmidti Chamberlin

Amplinus schmidti Chamberlin, 1952, Ann. Entom. Soc. America, 45: 576, fig. 38. ♂ HT (FMNH) from Volcán Tajumulco, Dept. San Marcos, Guatemala.

Amplinus serratus Kraus

Amplinus serratus Kraus, 1954, Senckenb. biol., 35: 311, figs. 32,33. ♂ HT (SMF) from Monte Cristo, Dept. Santa Ana, El Salvador.

Amplinus tajumulco Chamberlin

Amplinus tajumulco Chamberlin, 1952, Ann. Entom. Soc America, 45: 376, fig. 39. ♂ HT (FMNH) from Volcán Tajumulco, Dept. San Marcos, Guatemala.

Amplinus tapachulae Chamberlin

Amplinus tapachulae Chamberlin, 1943, Bull. Univ. Utah, 34(7): 57. ♀ HT (USNM) from Tapachula, Chiapas, Mexico.

Amplinus triramus Pocock

Amplinus triramus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 153, pl. XI, figs. 7-7h. ♂ HT (location unknown) from Omilteme (= Omiltemi), Guerrero, Mexico.

Amplinus vergelanus Chamberlin

Amplinus vergelanus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 57. ♂ HT (USNM) from El Vergel, Chiapas, Mexico.

Amplinus xilitlus Chamberlin, nomen correctum

Amplinus xelitlus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 57. ♂ HT (USNM) from Xilitla (misspelled Xelitla by Chamberlin), San Luis Potosí, Mexico.

Amplinus zunilus Chamberlin, nomen correctum

Amplinus zuniulus Chamberlin, 1952, Ann. Entom. Soc. America, 45: 577, fig. 40. ♂ HT (FMNH) from Finca Monte Cristo, Volcán Zunil, Dept. Solola, Guatemala.

SPECIES NAME OF UNCERTAIN STATUS

Polydesmus Picteti DeSaussure, 1859, Linnaea Entom., 13: 325. ST? (MHNG) from Cordova, Orizaba, and Panuco, Veracruz, Mexico.

DeSaussure (1860: 294) considered *Picteti* to be a synonym of *A. klugii.* But since the genitalic characters of Brandt's species were unknown to DeSaussure, that association may have been incorrect. Revision of the specimens labeled as *klugii* in MHNG, and selection of a lectotype, may result in validation of *picteti,* even its priority over some name later proposed for a Veracrucian amplinid, such as *A. pococki* Cook or *A. bitumidus* Loomis..

Genus **Exallostethus** Hoffman

Exallostethus Hoffman, 1975, Proc. Biol. Soc. Washington, 88: 212. Type species: *E. thrinax* Hoffman, by original designation.

One species, Chiapas.

Exallostethus thrinax Hoffman

Exallostethus thrinax Hoffman, 1975, Proc. Biol. Soc. Washington, 88: 212, figs. 1-4. ♂ HT (VMNH) from site along Hy. 195, 11.6 miles north of Pueblo Nuevo, Chiapas, Mexico.

Genus **Polylepiscus** Pocock

Polylepiscus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 154. Type species: *P. stolli* Pocock, by original designation. – Hoffman, 1954, Journ. Washington Acad. Sci., 44: 52; 1962, Proc. Entom. Soc. Washington, 64: 137 (key to then known species).

Euplinus Chamberlin, 1952, Ann. Entom. Soc. America, 45: 578. Type species: *E. volcanicola* Chamberlin, by original designation. Synonymized by Hoffman, 1954.

Nine species, Chiapas, Guatemala. It is remarkable that so many of these big millipeds are still known only from the original types.

Polylepiscus actaeon Pocock

Polylepiscus actaeon Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 155, pl. XII, figs. 2-2c. Location of ♂ HT unknown, from "Guatemala" without further locality.

Polylepiscus burgeri Causey

Polylepiscus burgeri Causey, 1954, Proc. Biol. Soc. Washington, 67: 65, fig. 23. ♂ HT (INHS) from 17 miles south of Simojovel, Chiapas, Mexico.

Range: Also recorded from 15 miles south of Pichucalco, Chiapas.

Polylepiscus campanulae Hoffman

Polylepiscus campanulae Hoffman, 1962, Proc. Entom. Soc. Washington, 64: 137, figs. 1, 2. ♂ HT (USNM) from site beside Hy. 190, seven miles east of San Cristóbal de las Casas, Chiapas, Mexico.

Polylepiscus furcifer Pocock

Polylepiscus furcifer Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 156, pl. XII, figs. 1-1h. Location of ♂ HT unknown, formerly BMNH, from "?Guatemala" without further details. – Hoffman, 1954, Journ. Washington Acad. Sci., 44: 52.

Euplinus volcanicola Chamberlin, 1952, Ann. Entom. Soc. America, 45: 578, fig. 43. ♂ HT (FMNH) from Volcán Tajumulco, Dept. San Marcos, Guatemala. Synonymized by Hoffman, 1954.

Range: Recorded only from the type locality of *volcanicola*.

Polylepiscus heterosculptus heterosculptus (Carl)

Pachyurus heterosculptus Carl, 1902, Revue suisse Zool., 10: 635, fig. 73-75. ♂ HT (MHNG) from "Guatemala" without further locality.

Polylepiscus heterosculptus: Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 157.

Polylepiscus heterosculptus heterosculptus: Hoffman, 1954, Journ. Washington Acad. Sci., 44: 53.

Polylepiscus heterosculptus pococki Hoffman

Polylepiscus heterosculptus pococki Hoffman, 1954, Journ. Washington Acad. Sci., 44: 53, fig. 1. ♂ HT (USNM) from Tumbala, Chiapas, Mexico.

Polylepiscus major (Chamberlin)

Aphelidesmus major Chamberlin, 1952, Ann. Entom. Soc. America, 45: 581. ♀ HT (FMNH) from Escobas, opposite Puerto Barrios, Dept. Izabal, Guatemala.

Polylepiscus major: Hoffman, 1964, Proc. Biol. Soc. Washington, 77: 171.

Polylepiscus stolli Pocock

Polylepiscus stolli Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 155, pl. XII, figs. 3-3d. ♂ HT (location unknown) from Cholhuitz, Dept. Huehuetenango, Guatemala.

Polylepiscus trimaculatus Hoffman

Polylepiscus trimaculatus Hoffman, 1954, Journ. Washington Acad. Sci., 44: 53, fig. 2. ♂ HT (USNM) from Finca Sepacuité, 50 km east of Cobán, Dept. Alta Verapaz, Guatemala.

Polylepiscus vomeroi Shear

Polylepiscus vomeroi Shear, 1977, Accad. Naz. Lincei, Prob. Sci. Cult., 171: 244, figs. 19-23. ♂ HT (AMNH) from Gruta II, Finca Santa Anita, Simojovel de Allende, Chiapas, Mexico.

Genus **Seminellogon** Chamberlin

Seminellogon Chamberlin, 1933, Pan-Pacific Entom., 9: 18. Type species: *S. chitarianus* Chamberlin, by original designation. Synonymized with *Amplinus* by Jeekel, 1963; with *Pycnotropis* by Hoffman, 1980; revalidated by Vohland, 1999.

Sigmogonotropis Hoffman, 1951, Proc. U. S. Nat. Mus., 102: 240. Type species: *S. serratus* Hoffman, by original designation. Synonymized with *Amplinus* by Jeekel, 1963; with *Pycnotropis* by Hoffman, 1980.

Five species, Panama, Costa Rica.

Seminellogon bituberculosus (Loomis), new combination!

Amplinus bituberculosus Loomis, 1974, Florida Entom., 57: 177, fig. 13. ♂ HT (FSCA) from Finca Las Cruces, near San Vito, Prov. Puntarenas, Costa Rica.

Seminellogon cerroazulensis Hoffman

Seminellogon cerroazulensis Hoffman, 1954, Journ. Washington Acad. Sci. 54: 54, fig. 3. ♂ HT (USNM) from Cerro Azul, Prov. Panama, Panama. – Loomis, 1964, Fieldiana: Zool., 47: 54.

Amplinus cerroazulensis Loomis, 1968, U. S. Nat. Mus. Bull. 266; 21.

Range: Chiriquí and Panama provinces, Panama.

The original label with the type specimen did not indicate a province; I selected Chiriquí chiefly because the other two samples known to me originated there. However, Loomis (1964: 54) specified that Cerro Azul was "near Goofy Lake", in Panama Province. I have not been able so far to locate a Cerro Azul in either province mentioned. There may be several small places, not on most maps, by that name in Panama.

Seminellogon chitarianus Chamberlin

Seminellogon chitarianus Chamberlin, 1933, Pan-Pacific Entom., 3: 19, figs. 6-8. ♂ HT (USNM) from Chitaria, Prov. Cartago, Costa Rica.

Seminellogon magnus Loomis

Seminellogon magnus Loomis, 1964, Fieldiana: Zool., 47: 54, figs. 5C-E. ♂ HT (FMNH) from El Valle, Prov. Coclé, Panama.

Seminellogon panamicus (Chamberlin)

Aphelidesmus panamicus Chamberlin, 1925, Proc. Biol. Soc. Washington, 38: 41. ♀ HT (MCZ) from "headwaters of Rio Chinilla", Canal Zone, Panama.

Seminellogon panamicus: Loomis, 1961, Proc. U. S. Nat. Mus., 113: 86.

Sigmogonotropis serratus Hoffman, 1951. Proc. U. S. Nat. Mus., 102: 240, fig. 1. ♂ HT (USNM) from Cana, Prov. San Blas, Panama. Synonymized by Loomis, 1968.

Range: Canal Zone east along the north coast nearly to the Colombian border.

Subfamily Aphelidesminae Brolemann

Aphelidesminae Brolemann, 1916, Ann. Soc. Entom. France, 84: 550, 584. – Hoffman, 1998, Myriapodologica, 5: 136.

Monotypic, but current studies indicate that *Aphelidesmus* in its present inclusive sense requires division into at least four genera (most confined to northern South America).

Genus **Aphelidesmus** Brolemann

Trachelorhachis Silvestri, 1898, Boll. Mus. Zool. Anat. Comp. Torino, 13(324): 5. Type species: *T. rivicola* Silvestri, by monotypy (preoccupied).

Aphelidesmus Brolemann, 1898, Ann. Soc. Ent. France, 67: 266. Type species: *A. hermaphroditus* Brolemann, by subsequent designation of Pocock, 1909.

Trachelacantha Berg, 1899, Comun. Mus. Nac. Buenos Aires, 1: 77. Type species: *Trachelorhachis rivicola* Silvestri, 1898, by direct substitution (replacement name for *Trachelorhachis*).

About 30 species, Costa Rica to Ecuador and western Brazil.

The apparent absence of this genus from most of Panama is noteworthy, but not without parallel in other groups of Diplopoda. Only type localities are cited for the following species, as published records for the Costa Rican species are not reliable prior to a careful revision of the material.

Aphelidesmus calverti Chamberlin

Aphelidesmus calverti Chamberlin, 1914, Trans. American Entom. Soc., 40: 191, figs. 6, 7. ♂ HT (ANSP) from La Emilia, Puerto Limón, Prov.Limón, Costa Rica.

Aphelidesmus glaphyros (Attems)

Euryurus glaphyros Attems, 1899, Denkschr. Akad. Wiss. Wien, 68: 279, pl. 2, figs. 8-10. ST (NMW) from Costa Rica, without further details.

Aphelidesmus glaphyros: Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 158.

Aphelidesmus intermedius Chamberlin

Aphelidesmus intermedius Chamberlin, 1914, Trans. American Entom. Soc., 40: 192, figs. 8-10. ♂ HT (ANSP) from Juan Viñas, Prov. Cartago, Costa Rica.

Aphelidesmus taurinus Loomis

Aphelidesmus taurinus Loomis, 1964, Fieldiana: Zool., 47: 51, figs. 5A-B. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panama.

Aphelidesmus tertius Chamberlin

Aphelidesmus tertius Chamberlin, 1948, Ent. News, 59: 269, figs. 1, 2. ♂ HT (USNM) said to be from Kerrville, Kerr Co., Texas, but in actuality doubtless from Costa Rica or Colombia.

Only a revision of the entire genus will clarify the identity and status of this nominal species.

Family Platyrhacidae Pocock

Platyrrhachidae [*sic!*] Pocock, 1895, Ann. Mus. Civ. Stor. Nat. Genova, 34: 788.

Platyrhacidae Attems, 1938, Das Tierreich, 69: 202 (synopsis of family). – Hoffman, 1998, Myriapodologica, 5: 135.

Seven tribes, not allocated to subfamilies, are recognized by Hoffman (1998).

Tribe Barydesmini Hoffman

Platyrhacini Hoffman, 1960, Proc. U. S. Nat. Mus. 111: 20.

Barydesmini Hoffman, 1980, Classification of the Diplopoda, p. 163.

With the restriction of the name *Platyrhacus* to a genus endemic in the East Indies, a new name was needed for the Neotropical taxa formerly referred to that name, and those of related genera.

Genus **Barydesmus** Cook

Barydesmus Cook, 1896, Brandtia 12: 53. Type species: *B. kerri* Cook, by original designation. – Hoffman, 1980, Classification of the Diplopoda, p. 163.

Platyrhacus (non sensu Koch, 1847) Hoffman, 1956, Proc. Biol. Soc. Washington, 69: 45 (concept based on incorrect type species; *Platyrhacus* has subsequently been typified by *P. fuscus* Koch, an Indonesian species [ICZN, Opinion 1128, 1979]).

Platyrhacus (Tirodesmus) Attems, 1938, Das Tierreich, 69: 229 (key to then-known species).

About 36 names has been based on specimens referable to this genus, many are unquestionably synonymous; four generic names have been proposed for South American taxa. Costa Rica to Peru and northwestern Brazil; so far, however, there are no records for the central provinces of Panama..

Barydesmus chapini (Hoffman), new combination

Platyrhacus chapini Hoffman, 1953, Proc. Entom. Soc. Washington, 55: 254, figs. 1-3. ♂ HT (USNM) from Los Siguas, Chiriquí Prov., Panama.

Barydesmus gracilipes (Loomis), new combination

Platyrhacus gracilipes Loomis, 1964, Fieldiana: Zool., 47: 60, figs. 5O-R. ♂ HT (FMNH) from Cerro Punta, 6600 ft., Prov.Chiriquí, Panama.

Barydesmus pococki (Brolemann), new combination

Platyrachus stenopterus [nec stenopterus Brolemann, 1905] Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 145, pl. X, figs. 8-8c (♂ & ♀ from Costa Rica without further locality).

Platyrrhacus pococki Brolemann, 1911, Bull. Soc. entom. France for 1911: 14. ♀ ST (MHNP) from Cuesta del Tablazo (84.7 W, 9.50 N), Prov. San José, Costa Rica.

If Brolemann's identification of his material from Cuesta del Tablazo as conspecific with "stenopterus" sensu Pocock is correct, this species is referable to *Barydesmus*.

Barydesmus propinquus (Carl), new combination

Platyrrhacus propinquus Carl, 1902, Rev. suisse Zool., 10: 665, figs. 80-82. ♂ & ♀ ST (MHNG) from "Las Delicias, Sta-Clara (Costarica)". Loomis (1974: 179) deduced that the village called Delicias on the Rio Guacalito (± 10.53 N, 85.10 W), Alajuela Prov., Costa Rica, is the probable place as thus identified on Biolley's label.

Barydesmus stenopterus (Brolemann), new combination

Platyrrhacus stenopterus Brolemann, 1905, Ann. Soc. Entom. France, 74: 343. ♂ HT (MHNP) from Rancho Redondo (84.10 W, 9.55 N), Prov. San José, Costa Rica.

Although this species is known only from the female type, apparently it is similar enough structurally to *B. pococki* to justify inclusion in *Barydesmus*.

Genus **Nyssodesmus** Cook

Nyssodesmus Cook, 1896, Brandtia 12: 53. Type species: *N. alboalatus* Cook, by original designation.– Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 37 (in part). – Hoffman, 1960, Proc. U. S. Nat. Mus., 111:26.

13 species, endemic in the area Nicaragua-Costa Rica-western Panama.

Nyssodesmus alboalatus Cook

Nyssodesmus alboalatus Cook, 1896, Brandtia, 12: 53. ♂ HT (ZMB) from Puerto Viejo, Heredia Prov., Costa Rica (the specimen is so labeled by P. Biolley, its collector; Cook's published locality "Nicaragua" is obviously in error).

Nyssodesmus antius (Chamberlin)

Platyrachus antius Chamberlin, 1914, Trans. American Entom. Soc., 40: 189, figs. 4, 5. ♂ HT (ANSP?, MCZ?) from Juan Viñas, Prov. Cartago, Costa Rica.

Nyssodesmus antius: Chamberlin, 1922, Proc. U. S. Nat. Mus. 60(8): 40.

Nyssodesmus attemsi Hoffman

Nyssodesmus attemsi Hoffman, 1960, Proc. U. S. Nat. Mus. 111: 27, fig. 1d. ♂ HT (USNM) from Puerto Armuelles, Prov. Chiriquí, Panama.

Nyssodesmus concolor Loomis

Nyssodesmus concolor Loomis, 1964, Fieldiana:Zool., 47: 59, figs. 5L-N. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panama.

Nyssodesmus fraternus (Carl)

Platyrrhacus fraternus Carl, 1902, Rev. Suisse Zool., 10: 655, fig. 71. ♂♀ ST (MHNG) from San José and Puerto Limón, Costa Rica, no designation of lectotype has been made.

Nyssodesmus fraternus: Chamberlin, 1922, Proc. U. S. Nat. Mus. 60(8): 40.

Nyssodesmus limonensis (Attems)

Platyrrhacus limonensis Attems, 1899, Denkschr. Akad. Wiss. Wien, 68: 344, fig. 319. ♂ HT (ZMH) from Puerto Limón, Prov. Limón, Costa Rica.

Nyssodesmus luteolus Loomis

Nyssodesmus luteolus Loomis, 1974, Florida Entom., 57: 178, fig. 14. ♂ HT (FSCA) from Finca Las Cruces, 4000 ft., west of San Vito, Prov. Puntarenas, Costa Rica.

Nyssodesmus mimus Chamberlin

Nyssodesmus mimus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 38, pl. 15, figs. 9-11. ♂ HT (MCZ) from "Nicaragua" without further locality.

Nyssodesmus nicaraguanus Chamberlin

Nyssodesmus nicaraguanus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 39, pl. 16, figs. 1-4. ♂ HT (?MCZ) from Machucha (province not located), Nicaragua.

Nyssodesmus python (Peters)

Polydesmus (Odontodesmus) python Peters, 1864, Monatsb. Akad. Wiss. Berlin für 1864: 543. ♂ HT (ZMB) from "Costa Rica" without further locality.

Platyrrhacus bivirgatus Carl, 1902, Rev. Suisse Zool., 10: 652, fig. 65. MF ST (MHNG) from San José, Costa Rica. **New synonymy!**

Nyssodesmus nigricaudus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 37, pl. 15, figs. 4-8. ♂ HT (USNM) from "Costa Rica" without further locality. **New synonymy!**

The identity of the names *python* and *bivirgatus* was implied already by Brolemann (1905) and Pocock (1909). I have examined the type material of both names and consider them conspecific. The name *nigricaudus* was justified primarily because the epiproct was black instead of yellow as in *bivirgatus*. My examination of the type specimen of *nigricaudus* showed that the epiproct was merely coated with black mud, which easily flaked off to show the underlying yellow coloration. The species appears to be widespread and locally abundant in Costa Rica.

Nyssodesmus tristani (Pocock)

Platyrachus tristani Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 141, pl. X, figs. 6-6b. ♂ HT (location unknown) from La Palma [perhaps the coastal town west of Quepos, Prov. Puntarenas], Costa Rica.

Nyssodesmus vialis Loomis

Nyssodesmus vialis Loomis, 1974, Florida Entom., 57: 179, fig. 15. ♂ HT (FSCA) from site at 5000 ft. along the Carretera Interamericana, between Cerro de la Muerte and San Isidro General, Prov.San José, Costa Rica.

Genus **Tirodesmus** Cook

Tirodesmus Cook, 1896, Brandtia 12: 53. Type species: *Polydesmus fimbriatus* Peters, 1864, by original designation. – Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 146.

Two (?) species, Costa Rica, Panama.

Tirodesmus biolleyi (Carl)

Platyrrhacus biolleyi Carl, 1902, Rev. suisse Zool., 10: 658, figs. 67, 68. ♂ HT (MHNG) from Las Delicias, Costa Rica, presumably the settlement on the Rio Guacalito, in northwestern Alajuela Prov.

Tirodesmus biolleyi: Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 146, pl. X, figs. 9-9b (records for La Palma and Cariblanco, Costa Rica).

Nyssodesmus albomarginis Chamberlin, 1933, Pan-Pacific Entom., 9: 16. ♀ HT (USNM) from La Palma (84.10 W, 10.10 N) nr. Cariblanco, Prov. Alajuela, Costa Rica. Synonymized by Loomis, 1968.

Range: Alajuela and Heredia provinces, Atlantic side of the Cordillera Central, Costa Rica; San Juan del Norte, Prov. Rio San Juan, Nicaragua.

Tirodesmus fimbriatus (Peters)

Polydesmus (Stenonia) fimbriatus Peters, 1864, Monatsb. Akad. Berlin for 1864: 543. ♂ HT (ZMB) from "Veragua" without further locality.

Tirodesmsus fimbriatus: Cook, 1896, Brandtia, p. 53.

Range: The locality label with the holotype may actually have referred to Veraguas Province, Panama, as was assumed by Carl (1914: 975). Attems (1938: 232) repeated that citation and added "Neugrenada" (the old name for Colombia) on the basis of a male specimen so labeled in the Vienna Museum, which I have examined. In the 19th Century, the present country of Panama included Veraguas Province of Colombia, which may explain how a specimen collected in Panama at that time might be labeled "New Grenada". There are no records for Colombia in its modern sense.

The gonopods of the NMW specimen from "Neugrenada" agree exactly with those of a male from Puerto Viejo, Costa Rica (VMNH). Chamberlin (1922: 36) was probably correct in considering the two names as strict synonyms.

Tribe Psammodesmini Hoffman

Psammodesmini Hoffman, 1960, Proc. U. S. Nat. Mus., 11: 29.

One genus, northwestern South America.

Genus **Psammodesmus** Cook

Psammodesmus Cook, 1896, Brandtia 12: 53. Type species: *P. cos* Cook, by original designation. – Hoffman, 1953, Journ. Washington Acad. Sci., 43: 301.

Eight species, northern Peru to Panama.

Psammodesmus remotus Loomis

Psammodesmus remotus Loomis, 1964, Fieldiana: Zool. 47: 62, figs. 6A-D. ♂ HT (FMNH) from El Valle, Prov. Cocle, Panama.

Psammodesmus schmitti Loomis & Hoffman

Psammodesmus schmitti Loomis & Hoffman, 1953, Journ. Washington Acad. Sci., 43: 301, figs. 1-4. ♂ HT (USNM) from Puerto Obaldia, Prov. San Blas, Panama.

Range: Known also from Cana, Darién Prov., Panama.

GENERA OF UNCERTAIN TRIBAL POSITION

Genus **Nanorrhacus** Cook

Nanorrhacus Cook, 1896, Brandtia 12: 52. Type species: *Platyrhacus luciae* Pocock, 1894, by original designation.

Monobasic; Lesser Antilles.

Jeekel (1963, 1980) expressed no conviction about the relationships of this genus; Hoffman (1980) placed it in the Platyrhacini, more or less by default, suspecting that the type species might have been introduced from the Indomalayan Region.

Nanorrhacus luciae Pocock

Platyrhacus luciae Pocock, 1894, Journ. Linnean Soc. London, 24: 511, pl. 39 figs. 3,3d ♂ HT (BMNH) from Santa Lucia, British West Indies. – Jeekel, 1980, Bull. Zool. Mus. Amsterdam, 7: 84, figs. 4, 5.

Genus **Proaspis** Loomis

Proaspis Loomis, 1941, Journ. Washington Acad. Sci., 31: 193. Type species: *P. aitia* Loomis, by original designation.

One (two?, three?) species, West Indies.

Whether the two species listed here are congeneric cannot be assumed until male topotypes of the type species *aitia* are obtained in Haiti. *A priori*, I suspect they are not closely related.

Proaspis aitia Loomis

Proaspis aitia Loomis, 1941, Journ. Washington Acad. Sci., 31: 194, figs. 10-12. ♀ HT (USNM) from roadside between Camp Perron and Rivière Glace, Haiti.

Proaspis sahlii Jeekel

Proaspis sahlii Jeekel, 1980, Bull. Zool. Mus. Amsterdam, 7: 81, figs. 1-3. ♂ HT (ZMA) from "Parc naturel de Guadeloupe", Basse Terre, Guadeloupe. – ? Mauriès, 1980, Bull. Mus. natn. Hist. natur. Paris, (4) 2 (A4): 1071, figs. 14-15.

Comparison of the gonopod drawings by Jeekel (1980: fig. 3) and Mauriès (1980: fig. 14), drawn from the same aspect, strongly suggests that two species are involved.

Family Sphaeriodesmidae Humbert & DeSaussure

Sphaeriodesmii Humbert & DeSaussure, 1869, Rev. & Mag. Zool. (2) 21: 149.

Sphaeriodesminae Bollman, 1893, Bull. U. S. Nat. Mus. 46: 161.

Sphaeriodesmidae Silvestri, 1896, Ann. Mus. Civ. Stor. Nat. Genova, (2) 16: 185. – Cook, 1898, Proc. U. S. Nat. Mus., 21: 460.

Cyclodesmidae Silvestri, 1895, Ann. Mus. Civ. Stor. Nat. Genova, (2) 14: 747 (in part, *Cyclodesmus* only). – Cook, 1898, Proc. U. S. Nat. Mus., 21: 459.

13 genera, Southeastern United States to Panama, Greater Antilles.

Subfamily Bonetesminae Hoffman

Bonetesminae Hoffman, 1980, Classification of the Diplopoda, p. 162.

One genus, Mexico (Veracruz).

This taxon probably merits family status, although the gonopod structure is clearly "sphaeriodesmoid."

Genus **Bonetesmus** Chamberlin

Bonetesmus Chamberlin, 1942, Bull. Univ. Utah, 33(4): 11. Type species: *B. verus* Chamberlin, by original designation. – Shear, 1974, Accad. Naz. Lincei, Prob. Att. Sci. Cult. 171(2): 257.

Three species, Mexico (Veracruz, Oaxaca).

Bonetesmus ojo Shear

Bonetesmus ojo Shear, 1974, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(2): 260, figs. 29-31. ♂ HT (MCZ) from Cueva del Ojo de Agua de Tlilapan, near Orizaba, Veracruz, Mexico.

Bonetesmus soileauae Shear

Bonetesmus soileauae Shear, 1982, Texas Mem. Mus. Bull. 28: 160, figs. 55-56. ♂ HT (AMNH) from Cueva de Las Maravillas, six km south of Acatlán, Oaxaca, Mexico.

Bonetesmus verus Chamberlin

Bonetesmus verus Chamberlin, 1942, Bull. Univ. Utah, 33(4): 11, figs. 18-20. ♂ HT (USNM) from Gruta de Atoyac, Veracruz, Mexico. – Shear, 1974, Accad. Naz. Lincei, Prob. Att. Sci. Cult. 171(2): 257, figs.20-28.

Bonetesmus novenus Causey, 1971, Assoc. Mexican Cave Stud. Bull. 4: 30. ♂ HT (USNM) from Cueva del Ojo de Agua Grande, 12 km NE of Cordoba, Veracruz, Mexico. Synonymized by Shear, 1974.

Range: Caves in southern Veracruz, Mexico.

Subfamily Desmoninae Cook

Desmonidae Cook, 1898, Proc. U. S. Nat. Mus., 21: 463.

Desmoninae – Hoffman, 1980, Classification of the Diplopoda, p. 162.

Six very nominal genera, southeastern United States to Guatemala.

My treatment of desmonines in the 1980 classification recognized the two tribes Desmonini and Hybocestini, with two further genera not placed in either owing to deficient descriptions. I am no longer convinced that this dichotomy is entirely correct, and for the purposes of this list omit the tribal category and revert to a simple alphabetical order for the genera.

Genus **Cyphodesmus** Peters

Cyphodesmus Peters, 1864, Monatsb. Akad. Wiss.Berlin für 1864: 530. Type species: *Oniscodesmus mexicanus* DeSaussure, 1859, by monotypy. – Hoffman, 1979, Rev. suisse Zool., 86: 4.

Peridysodesmus Silvestri, 1910, Zool. Anz., 35: 357. Type species: *P. trifidus* Silvestri, by original designation. Synonymized by Hoffman, 1979.

Three (?four) species, southern Mexico (Veracruz and Morelos).

Cyphodesmus bifidus (Silvestri), new combination

Peridysodesmus bifidus Silvestri, 1910, Zool. Anz., 35: 358, fig. 2. ♂ HT (LEAP) from Jalapa, Veracruz, Mexico.

Cyphodesmus hidalgonus Chamberlin

Cyphodesmus hidalgonus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 55. Imm. HT (USNM) from Chapulhuacan, Hidalgo, Mexico.

Placement in this genus was totally fanciful, considering the condition of the holotype; it could go almost anywhere in the Desmoninae.

Cyphodesmus mexicanus (DeSaussure)

Oniscodesmus mexicanus DeSaussure, 1859, Linnaea Entom., 13: 328; 1860, Mém. Soc. Phys. Hist. nat. Genève, 15: 278, pl. 1, fig. 2. ♂ LT, ♀ LPT (MHNG) from Cordoba, Veracruz, Mexico.

Cyphodesmus mexicanus: Peters, 1864, Monatsb. Akad. Wiss. Berlin für 1864: 530. – Hoffman, 1979, Rev. suisse Zool., 86: 5, figs. 1-8.

Cyphodesmus trifidus (Silvestri)

Peridysodesmus trifidus Silvestri, 1910, Zool. Anz., 35: 358, fig. 3. ♂ HT (LEAP) from Cuernavaca, Morelos, Mexico.

Genus **Desmonus** Cook

Desmonus Cook, 1898, Proc. U. S. Nat. Mus., 21: 463. Type species: *D. earlei* Cook, by original designation.– Causey, 1958, Proc. Biol. Soc. Washington, 71: 173.

Ethocyclus Chamberlin & Mulaik, 1941, Journ. New York Entom. Soc., 49: 58. Type species: *E. atophus* Chamberlin & Mulaik, by original designation. Synonymized by Loomis, 1959.

Desmoniella Loomis, 1943, Bull. Mus. Comp. Zool., 92: 400. Type species: *D. curta* Loomis, by original designation. **New synonymy!**.

Stilbopagus Loomis, 1966, Journ. Kansas Entom. Soc., 39: 516. Type species: *S. acclivus* Loomis, by original designation. Synonymized by Hoffman, 1980.

10 species, southern United States, northeastern Mexico, some of these names are surely superfluous.

Desmonus acclivus (Loomis), new combination.

Stilbopagus acclivus Loomis, 1966, Journ. Kansas Entom. Soc., 39: 516. ♀ HT (USNM) from Chipinque Mesa, Monterey, Nuevo León, Mexico; 1968, Journ. Kansas Entom. Soc., 39: 517, figs. 2-4, from male topotype.

Desmonus atophus (Chamberlin & Mulaik)

Ethocyclus atophus Chamberlin & Mulaik, 1941, Journ. New York Entom. Soc., 49: 58. HT (USNM) from "Raven Ranch", south of Kerrville, Kerr Co., Texas.

Desmonus atophus: Loomis, 1959, Journ. Washington Acad. Sci., 49: 157.

Desmonus austrus Causey

Desmonus austrus Causey, 1958, Proc. Biol. Soc. Washington, 71: 178, fig. 3. ST (?AMNH) from Magnolia. Columbia Co., Arkansas.

Range: Recorded by Causey from sites in Arkansas, Louisiana, and eastern Texas.

Desmonus conjunctus Loomis

Desmonus conjunctus Loomis, 1959, Journ. Washington Acad. Sci., 49: 158, figs. 1-3. ♂ HT (USNM) from a site between Bandera and Helotes, Bexar Co., Texas.

Desmonus curtus (Loomis)

Desmoniella curta Loomis, 1943, Bull. Mus. Comp. Zool., 92: 401, figs. 14a-c. ♂ HT (MCZ) from the Arbuckle Mountains, 2.3 miles south of Fittstown, Pontotoc Co., Oklahoma.

Desmonus crassus Loomis

Desmonus crassus Loomis, 1959, Journ. Washington Acad. Sci., 49: 158, fig. 4. ♂ HT (USNM) from Victoria Co., Texas, without closer locality.

Desmonus distinctus Loomis

Desmonus distinctus Loomis, 1959, Journ. Washington Acad. Sci., 49: 158, fig. 5. ♂ HT (USNM) from roadsite side, Beauregard Road, five miles south of Boerne, Kendall Co., Texas.

Desmonus earlei earlei Cook

Desmonus earlei Cook, 1898, Proc. U. S. Nat. Mus., 21: 643, pl. 32, figs. 1a-n. ♂ HT (?USNM) from Auburn, Lee Co., Alabama.

Desmonus earlei earlei: Causey, 1958, Proc. Biol. Soc. Washington, 71: 174.

Range: Southeastern United States, Kentucky north to the Ohio River, extreme southwestern Virginia, central and eastern Tennessee, central Georgia, most of Alabama, eastern Mississippi.

Desmonus earlei mancus Causey

Desmonus earlei mancus Causey, 1958, Proc. Biol. Soc. Washington, 71: 175. ♀ HT (?AMNH) from Florida Caverns State Park, Jackson Co., Florida.

Range: Recorded also from Polk Co., Georgia.

Desmonus inordinatus Causey

Desmonus pudicus (nec Bollman, 1888): Cook, 1896, Proc.U. S. Nat. Mus., 21: 465, pl. 32, figs.2a-b.

Desmonus inordinatus Causey, 1958, Proc. Biol. Soc. Washington, 71: 176, fig. 2. ♂ HT (?AMNH) from Okalona, Clark Co., Arkansas.

Range: Numerous localities in Arkansas; Barry Co., Missouri.

Desmonus pudicus (Bollman)

Sphaeriodesmus pudicus Bollman, 1888, Entom. Americana, 4: 3. HT (?USNM) from Little Rock, Pulaski Co., Arkansas.

Desmonus pudicus: Causey, 1958, Proc. Biol. Soc. Washington, 71: 175, fig. 1.

Range: Pulaski County, Arkansas only.

Genus **Hybocestus** Hoffman

Hybocestus Hoffman, 1959, Proc. Biol. Soc. Washington, 72: 173. Type species: *H. octonodus* Hoffman, by original designation.

Two species, Guatemala.

Hybocestus octonodus Hoffman

Hybocestus octonodus Hoffman, 1959, Proc. Biol. Soc. Washington, 72: 174, figs. 1-4. ♂ HT (USNM) from Cobán, Dept. Alta Verapaz, Guatemala.

Hybocestus plagiodon Hoffman

Hybocestus plagiodon Hoffman, 1959, Proc. Biol. Soc. Washington, 72: 177, fig.5. ♂ HT (USNM) from Finca Trece Aguas, five km southeast of Senahú, Dept. Alta Verapaz, Guatemala.

Genus **Taphrodesmus** Silvestri

Taphrodesmus Silvestri, 1910, Zool. Anz., 35: 357. Type species: *T. vestitus* Silvestri, by original designation.

Taphrodesmus vestitus Silvestri

Taphrodesmus vestitus Silvestri, 1910, Zool. Anz., 35: 357, fig. 3. ♂ HT (LEAP) from Jalapa [Xalapa], Veracruz, Mexico.

DESMONINAE OF UNCERTAIN STATUS

Genus **Tetraporosoma** Loomis

Tetraporosoma Loomis, 1966, Journ. Kansas Entom. Soc., 39: 517. Type species: *T. seriata* Loomis, by original designation.

Tetraporosoma seriatum Loomis

Tetraporosoma seriata [sic] Loomis, 1966, Journ. Kansas Entom. Soc., 39: 517, figs. 3-5. ♀ HT (USNM) from Chipinque Mesa, Monterey, Nuevo León, Mexico.

Subfamily Sphaeriodesminae Humbert & DeSaussure

Sphaeriodesmii Humbert & DeSaussure, 1869, Rev. & Mag. Zool. (2) 21: 149.

Sphaeriodesminae Bollman, 1893, U. S. Nat. Mus. Bull. 46: 161. – Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 119. – Hoffman, 1980, Classification of the Diplopoda, p. 161.

The taxonomy of this group is very unsatisfactory; several of the smaller included genera appear to be reasonably homogeneous whereas the two largest are remarkably diversified in terms of gonopod structure and almost certain require organization into smaller taxa. Until this can be undertaken, I have no choice but to follow existing information.

Nine nominal genera, Mexico to Panama, Greater Antilles.

Genus **Colobodesmus** Brolemann

Colobodesmus Brolemann, 1905, Ann. Soc. entom. France, 74: 347. Type species: *C. biolleyi* Brolemann, by monotypy.– Loomis, 1974, Florida Entom., 57: 180 (key to known species).

Four species, Costa Rica, Guatemala, El Salvador.

Colobodesmus biolleyi Brolemann

Colobodesmus biolleyi Brolemann, 1905, Ann. Soc.entom. France, 74: 350, figs. 8-14. ♂ HT (MHNP), from San José, Costa Rica.

Range: Reported also from Rincon, Prov. Puntarenas, Costa Rica (Loomis 1974).

Colobodesmus cobanus (Chamberlin)

Sphaeriodesmus cobanus Chamberlin, 1952, Ann. Entom. Soc. America, 45: 554, figs. 3, 4. ♂ HT (FMNH)from Cobán, Dept. Alta Verapaz, Guatemala.

Colobodesmus cobanus: Loomis, 1968, Bull.U. S. Nat. Mus. 266: 42.

Colobodesmus crucis Loomis

Colobodesmus crucis Loomis, 1974, Florida Entom., 57: 180, figs. 16-18. ♂ HT (FSCA) from Finca Las Cruces near San Vito, Puntarenas Prov., Costa Rica.

Colobodesmus triramus Kraus

Colobodesmus triramus Kraus, 1954, Senckenb. biol., 35: 320, figs. 47-49. ♂ HT (SMF) from Finca la Yoya, km 40 on highway behind Sonsonate, Dept. Sonsonate, El Salvador.

Range: Depts. Santa Ana and Sonsonate., El Salvador.

Genus **Cyclodesmus** Humbert & DeSaussure

Cyclodesmus Humbert & DeSaussure, 1869, Rev. & Mag. Zool., 13: 149. Type species: *C. aztecus*Humbert & DeSaussure, by monotypy.– Cook, 1898, Proc. U. S. Nat. Mus., 21: 459. – Carl, 1902, Rev. Suisse Zool., 10: 678.

One species, ?Veracruz, Mexico.

Cyclodesmus aztecus Humbert & DeSaussure

Cyclodesmus aztecus Humbert & DeSaussure, 1869, Rev. & Mag. Zool., 13: 149; Miss. Sci. Mexique, Zool., 6(2): 24, pl. I, figs. 3-3c. Location of type material uncertain (presumably MHNG), from no closer locality than "Cordillère orientale." – Carl, 1902, Rev. suisse Zool., 10: 678, fig. 109.

I have been unable to locate the original pinned specimens on which this species was based in the Geneva collection. It is especially unfortunate that *aztecus* is one of the few species for which some fairly precise locality was not mentioned by its describers, rendering its rediscovery in the field largely a matter of serendipity, and attention to the various places at which DeSaussure is known to have collected.

Genus **Cylionus** Cook

Cylionus Cook, 1898, Proc. U. S. Nat. Mus., 21: 462. Type species: *Sphaeriodesmus gracilis* Humbert & DeSaussure, 1869, by original designation. – Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 127.

Three species are described under this generic name, southern Mexico, Guatemala. As discussed by Pocock (1909: 127) the status of this name is uncertain and requires investigation.

Cylionus constrictus Pocock

Cylionus constrictus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 127, pl. IX, figs. 5-5f. Location of type material unknown, from Volcán de Agua, Dept. Sacatepequez, Guatemala.

Cylionus gracilis (Humbert & DeSaussure)

Sphaeriodesmus gracilis Humbert & DeSaussure, 1869, Rev. & Mag. Zool., (2) 21: 149; 1872, Miss. Sci. Mexique, Zool., (6) 2: 22, pl. 1, figs. 2-2l. Type material (?MHNG) from "la Cordillère orientale du Mexique; Moyoapan."

Cylionus gracilis: Cook, 1898, Proc. U. S. Nat. Mus. 21: 463. – Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 128.

I could not locate the type material at Geneva, nor was *gracilis* among the species redescribed by Carl in 1902-03. The collection of topotypic specimens at Moyoapan, a settlement close to Fortin de las Flores, Veracruz, warrants special consideration.

Cylionus kauanus Chamberlin

Cylionus kauanus Chamberlin, 1938, Carnegie Inst. Washington Publ. 491: 182, figs. 52-55. ♀F HT (USNM) from Kaua Cave at Kaua, Yucatan, Mexico.

Genus **Eusphaeriodesmus** Brolemann

Eusphaeriodesmus Brolemann, 1916, Ann. Soc. Entom. France, 84: 605. Type species: *Sphaeriodesmus angustus* Pocock, 1909, by original designation. – Loomis, 1972, Florida Entom., 55: 200 (key to known species).

Five species, Costa Rica to Veracruz and Guerrero, Mexico.

Eusphaeriodesmus angustus (Pocock)

Sphaeriodesmus angustus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 123, pl. IX, figs. 1-1g. Location of ♂ HT unknown, from Senahu, Dept. Alta Verapaz, Guatemala.

Eusphaeriodesmus bilobatus Loomis

Eusphaeriodesmus bilobatus Loomis, 1972, Florida Entom., 55: 200, figs. 23-25. ♂ HT (USNM) from Cairo, Limon Prov., Costa Rica.

Eusphaeriodesmus prehensor (Pocock)

Sphaeriodesmus prehensor Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 123, pl. VIII, figs. 9, 9a. ♂ HT (BMNH), from Omilteme [Omiltemi], Guerrero, Mexico.

Range: Recorded from two localities in Morelos, Mexico (Chamberlin, 1943).

Eusphaeriodesmus robustus (Pocock)

Sphaeriodesmus robustus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 122, pl. VIII, figs. 7-7h. ♂ HT (BMNH) from San Andres Tuxtla, Veracruz, Mexico.

Eusphaeriodesmus stylifer (Pocock)

Sphaeriodesmus stylifer Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 124, pl. IX, figs. 2-2c. Location of type material unknown, from "Irazu, Costa Rica", presumably Volcán Irazu, in Cartago Prov.

Genus **Haplocyclodesmus** Attems

Haplocyclodesmus [as subgenus of *Cyclodesmus*] Attems, 1940, Das Tierreich, 70: 368. Type species: Cyclodesmus *crassartus* Loomis, 1936, by original designation.

Caraibocyclus Loomis, 1959, Journ. Washington Acad. Sci., 49: 160. Type species: *Cyclodesmus angustipes* Loomis, 1936, by original designation. Synonymized by Hoffman, 1980.

17 species, Greater Antilles (Cuba, Haiti, Jamaica) and Guadeloupe, the majority of species in Haiti. It is remarkable that none have been described from the adjacent area of the Republica Dominicana..

Haplocyclodesmus angustipes (Loomis)

Cyclodesmus angustipes Loomis, 1936, Bull. Mus. Comp. Zool., 80: 86, fig. 37. ♂ HT (USNM) from near Trouin, Haiti.

Caraibocyclus angustipes: Loomis, 1959, Journ. Washington Acad. Sci., 49: 160.

Haplocyclodesmus crassartus (Loomis)

Cyclodesmus crassartus Loomis, 1936, Bull. Mus. Comp. Zool. 80: 81, fig. 34. ♂ HT (USNM) from Fond des Negre, Haiti.

Cyclodesmus (Haplocyclodesmus) crassartus: Attems, 1940, Das Tierreich, 70: 369.

Haplocyclodesmus enneryensis (Loomis)

Cyclodesmus enneryensis Loomis, 1936, Bull. Mus. Comp. Zool., 80: 92, fig. 40a,b. ♂ HT (USNM) from Ennery, Haiti.

Haplocyclodesmus falcarius (Loomis)

Cyclodesmus falcarius Loomis, 1936, Bull. Mus. Comp. Zool., 80: 98, fig. 44. ♂ HT (USNM) from Morne Pilboreau above Ennery, Haiti.

Haplocyclodesmus globulus (Loomis)

Cyclodesmus globulus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 90, fig. 39. ♂ HT (USNM) from site between Leogane and Petit Goave, Haiti.

Haplocyclodesmus haitianus (Chamberlin)

Cyclodesmus haitianus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 215. ♀ HT (MCZ) from Diquini, Haiti. – Loomis, 1936, Bull. Mus. Comp. Zool. 80: 100, fig. 45.

Range: Diquini, Petionville, and Kenscoff, Haiti.

Haplocyclodesmus hubbardi (Cook)

Cyclodesmus hubbardi Coook, 1896, Brandtia, 5: 28; 1898, Proc. U. S. Nat. Mus. 21: 460, pl. 31, fig. 2. ♂ HT (USNM) from a cave near Mandeville, Manchester Par., Jamaica.

Haplocyclodesmus incisus (Loomis)

Cyclodesmus incisus Loomis, 1936, Bull. Mus. Comp. Zool. 80: 88, fig. 38a-d, pl. 3, figs. 1, 2. ♂ HT (USNM) from Port au Prince, Haiti.

Haplocyclodesmus insulanus (Loomis)

Cyclodesmus insulanus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 93, fig. 41. ♂ HT (USNM) from Île de Cabrit, near Bayeux, Haiti.

Haplocyclodesmus irretitus (Loomis)

Cyclodesmus irretitus Loomis, 1937, Bull. Mus. Comp. Zool., 80: 219, figs. 7, 8. ♂ HT (MCZ) from "Soledad", near Cienfuegos, Prov. Cienfuegos., Cuba.

Haplocyclodesmus jeremiei Mauriès

Haplocyclodesmus jeremiei Mauriès, 1980, Bull. Mus. natn. Hist. natur. Paris, (4) 2 (A4): 1072, figs. 16-19. ♂ HT (MHNP) from Trace Merwart (Basse Terre), Guadeloupe.

Haplocyclodesmus montanus (Loomis)

Cyclodesmus montanus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 95, fig. 42. ♂ HT (MCZ) from Morne Pilboreau, above Ennery, Haiti.

Haplocyclodesmus nudatus (Loomis)

Cyclodesmus nudatus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 85, fig. 36. ♂ HT (USNM) from L'Archaie, Haiti.

Haplocyclodesmus obesus Loomis

Cyclodesmus obesus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 83, fig. 35. ♂ HT (USNM) from Fond des Negre, Haiti.

Haplocyclodesmus porcellanus (Pocock)

Cyclodesmus porcellanus Pocock, 1894, Journ. Linnean Soc. London, 24: 509, pl. 39, figs. 1, 1a. ♂ HT (BMNH) from "Jamaica" without further locality.

Range: The only known locality for the species is a site south of Claremont, St. Ann Par., Jamaica (Loomis, 1975).

Haplocyclodesmus rubellus (Loomis)

Cyclodesmus rubellus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 97, fig. 43. ♂ HT (USNM) from LeBorge, Haiti.

Haplocyclodesmus setosus (Loomis)

Cyclodesmus setosus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 101. ♀ HT (MCZ) from La Vestite, Haiti.

Genus **Ischnosphaeriodesmus** Brolemann

Ischnosphaeriodesmus Brolemann, 1916, Ann. Soc. Entom. France, 84: 561. Type species: *Sphaeriodesmus digitatus* Pocock, 1909, by original designation.

One species, Guatemala.

Ischnosphaeriodesmus digitatus (Pocock)

Sphaeriodesmus digitatus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 124, pl. IX, figs. 3-3d. ♂ HT (BMNH) from Volcán de Agua, Dept. Sacatepequez, Guatemala.

Ischnosphaeriodesmus digitatus: Brolemann, 1916, Ann. Soc. entom. France, 84: 561.

Genus **Lophocyclus** Loomis

Lophocyclus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 102. Type species: *L. laxatus* Loomis, by originaldesignation.

Four species, Haiti.

Structural diversity in gonopod structure suggests that this may be a polyphyletic group.

Lophocyclus laxatus Loomis

Lophocyclus laxatus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 106, fig. 48. ♀ HT (USNM) from a site north of Trouin, Haiti.

Lophocyclus munitus Loomis

Lophocyclus munitus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 105, fig. 47. ♂ HT (MCZ) from Roche Croix, Haiti.

Lophocyclus passus Loomis

Lophocyclus passus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 103, figs. 46a, b. ♂ HT (MCZ) from Roche Croix, Haiti.

Lophocyclus pumilus Loomis

Lophocyclus pumilus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 108, fig. 49. ♂ HT (MCZ) from Morne La Hotte, Haiti.

Genus **Proeilodesmus** Hoffman

Proeilodesmus Hoffman, 1990, Rev. suisse Zool., 97: 672. Type species: *P. mecistonyx* Hoffman, by original designation.

One species, Oaxaca.

Proeilodesmus mecistonyx Hoffman

Proeilodesmus mecistonyx Hoffman, 1990, Rev. suisse Zool. 97: 674, figs. 1-5, 9-13. ♂ HT (MHNG) from the cave "Nita Diplodocus" on Cerro Rabon, northeast of Huautla de Jimenez, Oaxaca, Mexico.

Genus **Sphaeriodesmus** Peters

Sphaeriodesmus Peters, 1864, Monatsb. Akad. Wiss. Berlin for 1864: 529. Type species: *Glomeridesmus mexicanus* De Saussure, 1859. – Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 119 (key to then- known species). – Shear, 1986, Texas Mem. Mus. Speleol. Monogr., 1: 81 (discussion of species groups).

34 species, Northern Mexico to Panama; Cuba, Jamaica.

Sphaeriodesmus bruesi (Chamberlin)

Cyclodesmus bruesi Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 215. ♂ HT (MCZ) from "Liguanea Plain" [eastern Kingston], St. Andrew Par., Jamaica.

Sphaeriodesmus bruesi: Loomis, 1937, Bull. Mus. Comp. Zool. 80: 222.

Sphaeriodesmus bukowinus Chamberlin

Sphaeriodesmus bukowinus Chamberlin, 1952, Ann. Ent. Soc. America, 45: 553, fig. 1,2. ♂ HT (FMNH) from Bukowina, Belize.

Range: Recorded from Ruinas de Coba, Quintana Roo, Mexico (Shear 1986).

Sphaeriodesmus conformans Chamberlin

Sphaeriodesmus conformans Chamberlin, 1925, Proc. Biol. Soc. Washington, 38: 44. ♂ HT (MCZ) from Barro Colorado Island, Canal Zone, Panama.

Sphaeriodesmus coriaceus Pocock

Sphaeriodesmus coriaceus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 125, pl. IX, figs. 4-4b. ♂ HT (BMNH) from San Juan, Dept. Alta Verapaz, Guatemala.

Range: Recorded from Volcán Tajumulco, Dept. San Marcos, Guatemala, and Ruinas de Cobá, Quintana Roo, Mexico.

Sphaeriodesmus cotzalostoc Shear

Sphaeriodesmus cotzalostoc Shear, 1986, Texas Mem. Mus. Speleol. Monogr. 1: 83, fig. 42. ♂ HT (AMNH) from Sumidero de Cotzalostoc, three km east of Totolacatla, Zongolica, Veracruz, Mexico.

Sphaeriodesmus cruzbelem Shear

Sphaeriodesmus cruzbelem Shear, 1974, Quad. Accad. Lincei, Probl. Att. Sci. Cult., 171(2): 279, figs. 71-75. ♂ HT (MCZ) from Cueva de la Cruz Belèn, Comitán, Chiapas, Mexico.

Sphaeriodesmus filamentosus Loomis

Sphaeriodesmus filamentosus Loomis, 1974, Florida Entom., 57: 182, fig. 19. ♂ HT (FSCA) from Finca las Cruces, near San Vito, Puntarenas Prov., Costa Rica.

Sphaeriodesmus golondrinensis Shear

Sphaeriodesmus golondrinensis Shear, 1974, Acc. Naz. Lincei,. Prob. Att. Sci. Cult., 171(2): 278, figs. 65-67. ♂ HT (MCZ) from Cueva de la Golondrina, Bochil, Chiapas, Mexico.

Sphaeriodesmus griseus Chamberlin

Sphaeriodesmus griseus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 55, fig. 172. ♂ HT (USNM) from Volcán Orizaba at 300 m.[?], Veracruz, Mexico.

Aside from being appreciably smaller, this nominal species is very similar to *S. mexicanus*, and is probably at best a subspecies.

Sphaeriodesmus grubbsi Shear

Sphaeriodesmus grubbsi Shear, 1986, Texas Mem. Mus. Speleol. Monogr., 1: 83, fig. 39. ♂ HT (AMNH) from Sótano del Rio Iglesia, five km southeast of Huautla de Jimenéz, Oaxaca, Mexico.

Sphaeriodesmus hondurasanus Chamberlin

Sphaeriodesmus hondurasanus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 57, pl. 14, figs. 8-10, pl. 15, figs. 1, 2. ♂ HT (USNM) from San Juan Pueblo, ? Dep. Yoro, Honduras.

Sphaeriodesmus iglesia Shear

Sphaeriodesmus iglesia Shear, 1986, Texas Mem. Mus. Speleol. Monogr., 1: 83, fig. 40. ♂ HT (AMNH) from Sótano del Río Iglesia, five km southeast of Huautla de Jimenéz, Oaxaca, Mexico.

Sphaeriodesmus isolatus Chamberlin

Sphaeriodesmus isolatus Chamberlin, 1940, Bull. Univ. Utah, 30(9): 13. ♂ HT (USNM) from Barro Colorado Island, Canal Zone, Panama.

Sphaeriodesmus longiramus Kraus

Sphaeriodesmus longiramus Kraus, 1954, Senckenb. Biol., 35: 319, figs. 45, 46.. ♂ HT (SMF) from Finca San Jorge, near Santa Ana, Dept. Santa Ana, El Salvador.

Sphaeriodesmus longitubus Loomis

Sphaeriodesmus longitubus Loomis, 1963, Journ. Kansas Entom. Soc., 36: 119, figs. 1-4. ♂ HT (USNM) from site on road to Chipinque Mesa, five miles southwest of Monterrey, Nuevo Léon, Mexico.

Sphaeriodesmus medius Carl

Sphaeriodesmus medius Carl, 1902, Rev. suisse Zool., 10: 675, figs. 105, 106. ♂ HT (MHNG) from "Guatemala", without further details.

Sphaeriodesmus mexicanus (DeSaussure)

Glomeridesmus mexicanus DeSaussure, 1859, Linnaea Entom., 13: 328; Mém. Soc. Phys. Hist. Nat. Genève, 15(2): 276, fig. 1. ♂ HT (MHNG) from Cordova [Cordoba], Veracruz, Mexico.

Sphaeriodesmus mexicanus: Peters, 1864, Monatsber. Akad. Wiss. Berlin für 1864: 529. – Carl, 1902, Revue suisse Zool., 10: 675, figs. 102-104.

Sphaeriodesmus michoacanus Chamberlin

Sphaeriodesmus michoacanus Chamberlin, 1942, Proc. Biol. Soc. Washington, 55: 57, figs. 2, 3. ♂ HT (USNM) from Cerro San Miguel near Tancítaro, Michoacan, Mexico.

Sphaeriodesmus neglectus Carl

Sphaeriodesmus neglectus Carl, 1902, Rev. suisse Zool., 10: 676, fig. 107, 108. 2 ♂ ST (MHNG) labeled "Mexico" without further details but probably from Veracruz or Puebla..

Range: Recorded from five km southeast of Huautla de Jiménez, Oaxaca, Mexico (Shear 1986)

Sphaeriodesmus nodulosus Kraus

Sphaeriodesmus nodulosus Kraus, 1954, Senckenb. Biol. 35: 318, fig. 43, 44. ♂ HT (SMF) from Hacienda los Planes, Dept. Santa Ana, El Salvador.

Sphaeriodesmus nortoni Shear

Sphaeriodesmus nortoni Shear, 1974, Accad. Naz. Lincei Att. Prolb. Sci. Cult., 171(2): 276, figs. 59-61. ♂ HT (MCZ) from Cueva Chica de la Perra, 8 miles northwest of Goméz Farias, Tamaulipas, Mexico.

Range: Recorded from three km south of Goméz Farias, Tamaulipas (Shear, 1986).

Sphaeriodesmus oniscus Pocock

Sphaeriodesmus oniscus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 122, pl. VIII, figs. 8-8b. ♂ HT (BMNH) from San Andres Tuxtla, Veracruz, Mexico.

Sphaeriodesmus pinetorum (Chamberlin)

Cyclodesmus pinetorum Chamberlin, 1922, Proc. U. S. Nat. Mus., 61(10): 16, pl.6, figs. 4, 5. ♂ HT (USNM) from Isla de Pinos [now Isla de la Juventud], Cuba.

Sphaeriodesmus pinetorum: Loomis, 1937, Bull. Mus. Comp. Zool., 80: 221, figs. 9, 10 (redescription, material from "Soledad", Prov. Cienfuegos, Cuba).

Sphaeriodesmus rabonus Shear

Sphaeriodesmus rabonus Shear, 1986, Texas Mem. Mus. Speleol. Monogr., 1: 85, figs. 43, 44. ♂ HT (AMNH) from trail to Cerro Rabon, 25-30 km east of Huautla Jimenéz, Oaxaca, Mexico

Sphaeriodesmus redondo Shear

Sphaeriodesmus redondo Shear, 1977, Accad. Naz. Lincei, Probl. Att. Sci. Cult., 171(3): 240, figs. 12, 13. ♂ HT (AMNH) from Cueva de Punte Redondo, Yitotl, Chiapas, Mexico.

Sphaeriodesmus robertsoni Shear

Sphaeriodesmus robertsoni Shear, 1986, Texas Mem. Mus. Speleol. Monogr. 1: 83, fig. 41. ♂ HT (AMNH) from Sumidero de Cotzalostoc, three km south of Totolacatla, Zongolica, Veracruz, Mexico.

Sphaeriodesmus salto Shear

Sphaeriodesmus salto Shear, 1974, Accad. Naz. Lincei, Att. Probl. Sci. Cult., 171(2): 276, figs. 62-64. ♂ HT (MCZ) from El Salto, San Luis Potosí, Mexico.

Sphaeriodesmus sanjose Shear

Sphaeriodesmus sanjose Shear, 1986, Texas Mem. Mus. Speleol. Monogr. 1: 85, fig. 45. ♂ HT (AMNH) from Cueva de San José, San José, Hidalgo, Mexico.

Sphaeriodesmus saussurei Attems

Sphaeriodesmus mexicanus (in part) Humbert & DeSaussure, 1872, Miss. Sci. Mexique, Zool., (6) 2: 21.

Sphaeriodesmus Saussurei Attems, 1899, Denks. Akad. Wiss. Wien, 69: 391. Four ST (MHNG) from "Cordillère orientale", Mexico (it is uncertain if the syntypes of this species were collected at Cerro de Escamela with the much larger specimens of *mexicanus*, with which they were combined by Humbert & DeSaussure). – Carl, 1902, Revue suisse Zool., 10: 677, figs. 100, 101 (illustration of male syntype)..

One of the two male syntypes was specified by me in 1979 and is here designated **lectotype** of *Sphaeriodesmus saussurei* Attems.

Sphaeriodesmus secundus Loomis

Sphaeriodesmus secundus Loomis, 1977, Florida Entom., 60: 24, figs. 7, 8. ♂ HT (FSCA) from Windsor Great Cave, 10 miles south of Falmouth, Trelawney Par., Jamaica.

Sphaeriodesmus sprousei Shear

Sphaeriodesmus sprousei Shear, 1986, Texas Mem. Mus. Speleol. Monogr. 1: 82, fig. 38. ♂ HT (AMNH)from Cueva de Galindo, 500 m south of Galindo, Tamaulipas, Mexico.

Sphaeriodesmus tortus Shear

Sphaeriodesmus tortus Shear, 1986, Texas Mem. Mus. Speleol. Monogr., 1: 85, figs, 46, 47. ♂ HT (AMNH) from Actún Loltún, seven km southwest of Oxkutzcab, Yucatán, Mexico.

Range: Recorded also from Caves Branch, Cayo Dist., Belize.

Sphaeriodesmus trullatus Shear

Sphaeriodesmus trullatus Shear, 1977, Accad. Naz. Lincei, Prob. Att. Sci. Cult. 171(3): 239, figs. 9-11. ♂ HT (AMNH) from Grutas de Llano Grande, at Llano Grande, Huixtla, Chiapas.

Sphaeriodesmus zontehuitz Shear

Sphaeriodesmus zontehuitz Shear, 1974, Accad. Naz. Lincei, Att. Probl. Sci. Cult. 171(2): 279, figs. 68-70. ♂ HT (MCZ) from Cueva de Arcotete, six km east of San Cristóbal de las Casas, Chiapas, Mexico.

Family Holistophallidae Silvestri

Holistophallidae Silvestri, 1909, Boll. Mus. Zool. Anat. comp. Univ. Torino, 24(615): 2. – Loomis, 1968, Bull. U. S. Nat. Mus., 266: 27. – Hoffman, 1990, Rev. suisse Zool., 97: 677 (definition of group).

Seven genera, Mexico to Honduras.

Genus **Duoporus** Cook

Duoporus Cook, 1901, Proc. Entom. Soc. Washington, 4: 403. Type species: *D. barretti* Cook, by original designation.

Monotypic. Mexico.

Duoporus barretti Cook

Duoporus barretti Cook, 1901, Proc. Entom. Soc. Washington, 4: 403. Type material (?USNM) from Cuernavaca, Morelos, Mexico.

Genus **Elcarmenia** Kraus

Elcarmenia Kraus, 1954, Senckenberg. Biol. 35: 328. Type species: *E. engelhardi* Kraus, by original designation.

Monotypic. El Salvador.

Elcarmenia engelhardi Kraus

Elcarmenia engelhardi Kraus, 1954, Senckenb. Biol. 35: 328, figs. 58-61. ♂ HT (SMF) from Finca El Carmen, Dept. San Vicinte, El Salvador.

Genus **Holistophallus** Silvestri

Holistophallus Silvestri, 1909, Boll. Mus. Zool Anat. Comp. Univ. Torino, 24(615): 2. Type species: *H. peregrinus* Silvestri, by original designation.

Monotypic, Central America.

Holistophallus peregrinus Silvestri

Holistophallus peregrinus Silvestri, 1909, Boll. Mus. Zool. Anat. comp. Univ. Torino, 24 (615): 4, figs.I-III ♂ HT (Mus. Zool. Univ.Torino) from Tabasco (?state), Mexico.

Range: East coast lowlands of Central America from Tabasco to northwestern Honduras.

Genus **Pammicrophallus** Pocock

Pammicrophallus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 183. Type species: *P. ornatus* Pocock, by original designation.

Three species, Guerrero to El Salvador.

Pammicrophallus ornatus Pocock

Pammicrophallus ornatus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 184, pl. XIV, figs. 3-3i. Location of type material unknown, from Omilteme (Omiltemi), 8000 ft., Guerrero, Mexico.

Pammicrophallus pasaquinae Kraus

Pammicrophallus pasaquinae Kraus, 1954, Senckenb. Biol. 35: 327, figs. 56, 57. ♂ HT (SMF) from km 198 on the highway from La Union to Pasaquina, Dept. La Union, El Salvador.

Pammicrophallus pictus Pocock

Pammicrophallus pictus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 185, pl. XIV, figs. 4-4b. Location of type material unknown, from Omilteme (Omiltemi), Guerrero, Mexico.

Genus **Synthodesmus** Chamberlin

Synthodesmus Chamberlin, 1922, Proc. U. S. Nat. Mus. 60(8): 54. Type species: *S. simulans* Chamberlin, by original designation.

Monotypic. Guatemala.

Synthodesmus simulans Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 54, pl. 21, figs. 6-9, pl. 22, figs. 1,2. ♂ HT (USNM) from San Rafael [? 30 km southwest of Jalapa, Dept. Jalapa], Guatemala.

The above specification of type locality is conjectural; I do not know at which of the several places called San Rafael Cook obtain the types, nor did Mr. Loomis who was in a better position to know. Perhaps Cook's field journal still exists in some USDA file and can provide a clue or hard evidence.

Genus **Tunodesmus** Chamberlin

Tunodesmus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 52. Type species: *T. orthogonus* Chamberlin, by original designation.

Two species, Guatemala.

Tunodesmus laminiger Chamberlin

Tunodesmus laminiger Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 53, pl. 21, figs. 3-5. ♂ HT (USNM) from San Rafael [Dept. Jalapa?], Guatemala.

Tunodesmus orthogonus Chamberlin

Tunodesmus orthogonus Chamberlin, 1922, Proc. U. S. Nat. Mus. 60(8): 53, pl. 19, figs. 10, pl. 20, figs. 1-9, pl. 21, figs. 1, 2. ♂ HT (USNM) from San Rafael [Dept. Jalapa?], Guatemala. – Hoffman, 1990, Rev. suisse Zool., 97: 677, fig. 14 (gonopod of holotype).

Genus **Zeuctodesmus** Pocock

Zeuctodesmus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 185. Type species: *Z. caeruleus* Pocock, by original description.

Two species, Mexico (Guerrero: Michoacan).

Zeuctodesmus caeruleus Pocock

Zeuctodesmus caeruleus Pocock, 1909, Biol. Centr.-Amer. Diplopoda, p. 186, pl. XIV, figs. 5-5j. Location of type materual unknown, from Amula, Guerrero, Mexico.

Zeuctodesmus ferrugineus Chamberlin

Zeuctodesmus ferrugineus Chamberlin, 1942, Bull. Univ. Utah, 34(7): 54, figs. 132-134. ♂ HT (USNM) from Zitacuaro, Michoacan, Mexico.

Family Rhachodesmidae Carl

Rhachidesminae Carl, 1903, Revue suisse Zool., 11: 553.

Rhachodesminae Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 170.

Rhachodesmidae Attems, 1914, Arch. Naturg. 80(A4): 281.

Aceratophallinae Verhoeff, 1941, Zool. Anz., 146: 82.

16 genera, Mexico to Costa Rica.

Removed from the family: *Sakophallus* Chamberlin, 1942 (see Nearctodesmidae).

The classification of this family is currently in a state of confusion; the limits of several genera are undefined, a number of species require relocation into new genera, additional synonymy is probable, and many new taxa remain to be accounted. Only a revision of the entire group will bestow law and order; and rather than anticipate likely changes my only option is to document the most recent treatment without prejudice. As a result, the following treatment is a patchwork of both reliable and totally chaotic information and should be recognized as such.

Genus **Aceratophallus** Carl

Aceratophallus Carl, 1902, Revue suisse Zool., 10: 608. Type species: *A. unicolor* Carl, by original designation.

Phorositus Chamberlin, 1952, Ann. Entom. Soc. America, 45: 562. Type species; *P. granulifer* Chamberlin, by original designation. Synonymized by Shear, 1974..

Twelve species, Yucatan to Costa Rica.

Aceratophallus calcehtokanus Chamberlin

Aceratophyllus [*sic!*] *calcehtokanus* Chamberlin, 1938, Carnegie Inst. Washington Publ. 491: 178, fig. 41. ♂ HT (USNM) from Xkye Cave, Calcehtok, Yucatan, Mexico.

Aceratophallus dux Chamberlin

Aceratophallus dux Chamberlin, 1914, Trans. American Entom. Soc., 40: 193, fig. 11. ♂ HT (?ANSP/MCZ) from Juan Viñas, Prov. Cartago, Costa Rica.

Aceratophallus granulifer (Chamberlin)

Phorositus granilifer Chamberlin, 1952, Ann. Entom. Soc. America, 45: 562, fig. 27. ♂ HT (FMNH) from Volcán Tajumulco, Dept. San Marcos, Guatemala.

Aceratophallus granulifer: Shear, 1974, Accad. Naz. Lincei, Prob. Att. Sci. Cult. 171(2): 268.

Aceratophallus guatemalae Chamberlin

Aceratophallus guatemalae Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 31, figs. 18, 19. ♂ HT (ANSP) from Piedras Negras, Dept. Petén, Guatemala.

Aceratophallus hoctunanus Chamberlin

Aceratophyllus [sic] hoctunanus Chamberlin, 1938, Carnegie Inst. Washington Publ. 491: 176, fig. 40. ♂ HT (USNM) from Hoctun Cave at Hoctun, Yucatan, Mexico.

Aceratophallus lamellifer Brolemann

Aceratophallus unicolor lamellifer Brolemann, 1905, Ann. Soc. ent. France, 74: 346, figs. 1-5. ♂ HT (MHNP) from San José, Costa Rica.

Aceratophallus lamellifer: Chamberlin, 1922, Proc. U. S. Nat. Mus. 60(8): 56.

Neoleptodesmus josefinus Attems, 1944, Zool. Anz., 144: 238, figs. 24, 25. ♂ HT (NMW) from La Caja, near San José, Costa Rica. **New synonymy!**

Range: Recorded also from Parismina, Chitaria, and Tilarán, Costa Rica.

Attems' fig. 24 and Brolemann's fig. 4 in the works cited represent identical gonopod structure, as might be expected from proximity of the type localities.

Aceratophallus maya Loomis

Aceratophallus maya Loomis, 1964, Proc. Biol. Soc. Washington, 77: 186, figs. 4-6. ♂ HT (USNM) from Tikal, Dept. Petén, Guatemala.

Aceratophallus oxkutzcabus Chamberlin

Aceratophyllus oxkutzcabus Chamberlin, 1938, Carnegie Inst. Washington Publ. 491: 176, figs. 33-39. ♂ HT (USNM) from Gongora Cave, Oxkutzcab, Yucatan, Mexico.

Aceratophallus quadratus Loomis

Aceratophallus quadratus Loomis, 1961, Proc. U. S. Nat. Mus. 113: 92, fig. 3a-b. ♂ HT (USNM) thought to be from the Canal Zone, Panama, later (Loomis, 1964) corrected to Amaya, between Corinto and Chinandega, Dept. Chinandega, Nicaragua.

Aceratophallus scutigeroides Shear

Aceratophallus scutigeroides Shear, 1974, Accad. Naz. Lincei. Prob. Att. Sci. Cult. 171: 269, figs. 50-54. ♂ HT (MCZ) from caves at Finca Sepacuite, Senahú, Dept. Alta Verapaz, Guatemala.

Aceratophallus sumucus Chamberlin

Aceratophallus sumucus Chamberlin, 1956, Ent. News, 67: 158, fig. 3. ♂ HT (USNM) from Musawas, Rio Waspuc, Dept. ?Zelaya, Nicaragua.

Aceratophallus unicolor Carl

Aceratophallus unicolor Carl, 1902, Revue suisse Zool., 10: 609, figs. 35, 36. ♂ HT (MHNG) from San José, Costa Rica.

Range: Recorded from El Gallito [Prov. ?Cartago], Costa Rica (Chamberlin, 1933).

Genus **Acutangulus** Attems

Acutangulus Attems, 1898, Denks. Akad. Wiss. Wien, 67: 409. Type species: *Polydesmus coccineus* DeSaussure & Humbert, 1869, by monotypy. – Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 178. – Causey, 1973, Bull. Assn. Mexican Stud., 5: 108 (key to five species).

Five species, Mexico.

Acutangulus alius Causey

Acutangulus alius Causey, 1973, Bull. Assn. Mexican Cave Stud. 5: 109, figs. 3-6. ♂ HT (USNM) from Cueva del Ojo de Agua de Tlilapan, Tlilapan, Veracruz, Mexico.

Acutangulus coccineus (Humbert & DeSaussure)

Polydesmus (Tropisoma) coccineus Humbert & DeSaussure, 1869, Rev. & Mag. Zool., 21: 152. ST (MHNG) from Orizaba, Veracruz, Mexico.

Polydesmus (Tropisoma) coccineus: DeSaussure & Humbert, 1872, Miss. Sci. Mexique, Zool., (6) 2: 160, pl. 1, fig. 12.

Acutangulus coccineus: Carl, 1903, Revue suisse Zool., 11: 560, fig. 17 (syntype gonopod).

Acutangulus neglectus Carl

Polydesmus (Strongylosoma) coccineus var. Humbert & DeSaussure, 1872, Miss. Sci. Mexique, Zool., (6) 2: 51.

Acutangulus neglectus Carl, 1903, Revue suisse Zool., 11: 650, fig. 16. ♂ STs (MHNG) from Orizaba, Veracruz, Mexico.

Acutangulus pictus Causey

Acutangulus pictus Causey, 1973, Bull. Assn. Mexican Cave Stud., 5: 109, fig. 7. ♂ HT (USNM) from Sótano de Botella Chica, three km northwest of Tequila, Veracruz, Mexico.

Acutangulus sororius Causey

Acutangulus sororius Causey, 1973, Bull. Assoc. Mexican Cave Stud., 5: 111, fig. 8. ♂ HT (USNM) from Coscamatepec, Veracruz, Mexico.

Genus **Ceuthauxus** Chamberlin

Ceuthauxus Chamberlin, 1942, Bull. Univ. Utah, 33(4): 12. Type species: *Pararachistes nuevus* Chamberlin, 1941, by original designation.

Six species, northern Mexico.

Ceuthauxus constans Causey

Ceuthauxus constans Causey, 1973, Bull. Assoc. Mexican Cave Stud., 5: 111, figs. 9, 10. ♂ HT (USNM) from Grutas del Mogote at El Mogote, 15 km NNE of Taxco, Guerrero, Mexico.

Ceuthauxus galeanae (Chamberlin)

Pararachistes galeanae Chamberlin, 1943, Bull. Univ. Utah, 34(7): 52, figs. 128-129. ♀ HT (USNM) from Laguna de Laboradores at Galeana, Nuevo León, Mexico.

Ceuthauxus galeanae: Causey, 1973, Bull. Assoc. Mexican Cave Stud., 5: 112.

Ceuthauxus mediator Chamberlin

Ceuthauxus mediator Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 32, fig. 20. ♂ HT (ANSP) from Pablillo, Neuvo León, Mexico.

Loomis (1976: 399, fig. 1) has noted that the gonopods now associated with the type material of this species do not resemble the drawing attributed to *mediator* in the original description.

Ceuthauxus morelus Chamberlin

Ceuthauxus morelus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 51, figs. 123, 124. ♂ HT (USNM) from Tepoztlán, Morelos, Mexico.

Ceuthauxus nuevus (Chamberlin)

Pararachistes [*sic*!] *nuevus* Chamberlin, 19841, Proc. Biol. Soc. Washington, 54: 63, figs. 1, 2. ♂ HT (USNM) from "Ojo de Agua", Sabinas Hidalgo, Nuevo León, Mexico.

Ceuthauxus nuevus: Chamberlin, 1942, Bull. Univ. Utah, 33(4): 12. – Loomis, 1976, Florida Entom., 59:397.

Ceuthauxus hirsutipes Loomis, 1968, Journ. Kansas Entom. Soc., 41: 383, fig. 1. ♂ HT (USNM) from Horsetail Falls, near Santiago, Nuevo León, Mexico. Synonymized by Loomis, 1976.

Ceuthauxus palmitonus Chamberlin

Ceuthauxus palmitonus Chamberlin, 1942, Bull. Univ. Utah, 33(4): 12. ♂ HT (?USNM) from Gruta del Palmito at Bustamente, Nuevo León, Mexico.

Genus **Chromodesmus** Loomis

Chromodesmus Loomis, 1976, Florida Entom., 59: 399. Type species: *C. woodruffi* Loomis, by originaldesignation.

Five species, eastern Mexico.

This taxon was mentioned as the "*potosianus* superspecies" by Causey (1971: 116). Status as a genus distinct from *Strongylodesmus* seems questionable.

Chromodesmus granulatus (Loomis), new combination.

Strongylodesmus granulatus Loomis, 1966, Ann. Entom. Soc. America, 59: 13, figs. 7, 8. ♂ HT (SMUK) from 18 miles southwest of Tamazunchale on Hy. 85, near Jacala, Hidalgo.

Chromodesmus planus Loomis

Chromodesmus planus Loomis, 1976, Florida Entom., 59: 400, fig. 3. ♂ HT (FSCA) from San Vicente, Hy. 85, north of Ixmiquilpan, Hidalgo, Mexico.

Chromodesmus potosianus (Chamberlin)

Ceuthauxus potosianus Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 32, fig. 21. ♂ HT (ANSP) from Alvarez, San Luis Potosí, Mexico.

Strongylodesmus potosianus: Loomis, 1968, Bull. U. S. Nat. Mus. 266: 41. – Causey, 1973, Bull. Assoc. Mexican Cave Stud., 5: 116.

Chromodesmus potosianus: Loomis, 1976, Florida Entom. 59: 400.

Range: Recorded from 17 km west of Santa Catarina, San Luis Potosí, Mexico.

Chromodesmus viridis Loomis

Chromodesmus viridis Loomis, 1976, Florida Entom. 59: 401, fig. 4. ♂ HT (FSCA) from Km. 165 on Hy.101, 1803 m ASL, Tamaulipas, Mexico.

Chromodesmus woodruffi Loomis

Chromodesmus woodruffi Loomis, 1976, Florida Entom., 59: 399, fig. 2. ♂ HT (FSCA) from 29 km south of Jacala, Hidalgo, Mexico.

Genus **Curodesmus** Chamberlin

Curodesmus Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 55. Type species: *C. guatemalensis* Chamberlin, by original designation.

Two species, Guatemala, El Salvador..

Synonymized with *Neoleptodesmus* by Attems, 1940.

Curodesmus guatemalensis Chamberlin

Curodesmus guatemalensis Chamberlin, 1922, Proc. U. S. Nat. Mus., 60(8): 55, pl. 22, figs. 3-6, pl. 24, figs. 1-4. ♂ HT (USNM) from San Rafael (?Departamento), Guatemala.

Neoleptodesmus guatemalensis: Kraus, 1954, Senckenberg. Biol., 35: 321.

Curodesmus vulcani (Kraus), new combination.

Neoleptodesmus vulcani Kraus, 1954, Senckenb. Biol. 35: 324, fig. 51. ♂ HT (SMF) from west side of Volcán Santa Ana near Buenos Aires, Dept. Santa Ana, El Salvador.

Range: Recorded also from two localities in Dept. Ahuachapan, El Salvador.

Genus **Diuncustoma** Shelley

Diuncustoma Shelley, 1997, Myriapodologica, 4: 85. Type species: *D. cylindricum* Shelley, by original designation.

Monotypic, southern Mexico.

Diuncustoma cylindricum Shelley

Diuncustoma cylindricum Shelley, 1997, Myriapodologica, 4: 86, figs. 1-9. ♂ HT (UCD) from 3.2 km west of Cordoba, Veracruz, Mexico.

Range: Known also from Temaxcal, Oaxaca, Mexico (map, Shelley 1997, fig. 1).

Genus **Metaphallus** Chamberlin

Metaphallus Chamberlin, 1952, Ann. Entom. Soc. America, 45: 560. Type species: *Metaphallus mimus* Chamberlin, by original designation.

Monotypic. Guatemala.

Metaphallus mimus Chamberlin

Metaphallus mimus Chamberlin, 1952, Ann. Entom. Soc. America, 45: 562, figs. 23-26. ♂ HT (FMNH) from Chichivac, Dept., Guatemala.

Genus **Mexidesmus** Loomis

Mexidesmus Loomis, 1976, Florida Entom. 59: 401. Type species: *Strongylodesmus harrisoni* Causey, 1971, by original designation.

Monotypic, Mexico (Tamaulipas)

Mexidesmus harrisoni (Causey)

Strongylodesmus harrisoni Causey, 1971, Bull. Assoc. Mexican Cave Stud., 4: 31. ♂ HT (not stated, inferentially USNM) from Cueva del Rancho del Cielo no. 7, six km northwest of Gómez Farias, Tamaulipas, Mexico; 1973, Bull. Assoc. Mexican Cave Stud., 5: 114, figs. 17, 18. – Shear, 1974, Accad. Naz. Lincei, Prob. Att. Sci. Cult. 171: 261

Mexidesmus harrisoni: Loomis, 1976, Florida Entom., 59: 402, fig. 5.

Genus **Neoleptodesmus** Carl

Neoleptodesmus Carl, 1903, Revue suisse Zool., 11: 557. Type species: *Polydesmus (Oxyurus) Sumichrasti* Humbert & Saussure, 1869, by subsequent designation of Pocock, 1909.

Euphallus Chamberlin, 1952, Ann. Entom. Soc. America, 45: 559. Type species: *E. dybasi* Chamberlin, by original designation. Synonymized by Loomis, 1968.

Five nominal species, Mexico (Veracruz). Some of the names admitted here are certain to be synonyms.

Removed from the genus: *Neoleptodesmus josephinus* Attems, 1944 (see *Aceratophallus), N. vulcan* Kraus, 1954 (see *Curodesmus*), also *N. geniculatus, salvadorensis,* and *sinuatus* Kraus, 1954 (see Species of Uncertain Generic Position).

Neoleptodesmus aztecus (DeSaussure)

Polydesmus (Leptodesmus) aztecus DeSaussure, 1859, Linnaea Entom., 13: 324. STs (MHNG) from "le plateau de Mexique" (see comment below); 1860, Mém. Soc. Phys. Hist. nat. Genève, 15: 301, figs. 5-5c.

Neoleptodesmus aztecus: Carl, 1903, Revue suisse Zool., 11: 559, fig. 21. – Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 180.

Neoleptodesmus dispersus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 53, figs. 130, 131. ♂ HT (USNM) from Nuevo Paraje, Veracruz, Mexico. **New synonymy!**

Euphallus dybasi Chamberlin, 1952, Ann. Entom. Soc. America, 45: 560, figs. 15, 16 [stated in the figure caption to be 19 and 20, but these represent the gonopod of a Brazilian chelodesmid]. ♂ HT (FMNH) from El Fortin, Veracruz, Mexico. Synonymized by Loomis, 1968.

Range: southern Veracruz . Specimens collected by W. T. Keeton in 1959 extend the range as far east as Volcán San Martin and westward to Ojozarco (at 5400 ft.!) on Hy. 293.

Loomis (1968: 37) cited Volcán de Tuxtla as the type locality. In his 1860 monograph, DeSaussure stated "Je l'ai trouvé à plusiers reprises sur le plateau de Puebla. Un grande individu mâle a été pris sur le flancs du Pic d'Orizaba, mais d'autres individus provienment du volcan de Tuxtla, d'un climat tempéré." The redescription of this species by Carl (1903: 559) mentioned "Originalexemplare" from Puebla, and when W. T. Keeton borrowed rhacodesmid material from Geneva, he was sent, of *aztecus*, only a male and immature female labeled "Puebla". Presumably the male is the specimen studied by Carl; the gonopods are missing and are perhaps on a microscope preparation which was at that time disassociated from the main collection.

In 1964 I did not see other specimens from the localities mentioned by DeSaussure. Perhaps the Puebla specimens are the only surviving members of the original series. Dr. Keeton returned them with the male designated as lectotype, which action as here publicized restricts the type locality to Puebla.

"The "volcan de Tuxtla" of DeSaussure is unquestionably Volcán San Martin, just east of San Andrés Tuxtla. Whether the same species occurs on this isolated mountain and the main eastern Cordillera at Orizaba remains to be established.

Neoleptodesmus intermedius (Humbert & DeSaussure)

Polydesmus (Oxyurus) intermedius Humbert & DeSaussure, 1869, Rev. & Mag. Zool., 21: 151. ♂ ♀ ST (?MHNG) from "Cordiliera orientalis mexicana." – DeSaussure & Humbert, 1872, Miss. Sci. Mexique, Zool., (6) 2: 49, pl. 1, fig. 10 ("le Mexique; Orizaba.). Synonymized with *N. sumichrasti* by Carl, 1903.

Carl (1903: 558) examined the original male type specimens. They were not sent to Keeton in 1966 and I do not know if they still exist at Geneva. In any event, I revive the name here to prevent its continued status as a synonym of *sumichrasti* prior to a revision of the genus.

Neoleptodesmus orizabae (Humbert & DeSaussure)

Polydesmus (Oxyurus) orizabae Humbert & DeSaussure, 1869, Rev. & Mag. Zool., 21: 151. ♀ HT (formerly MHNG, existence uncertain), from Orizaba, Veracruz, Mexico.

?*Neoleptodesmus orizabae:* Carl, 1903, Revue suisse Zool., 11: 557 (combination implied: "Hierher gehören.....wahrscheinlich....").

The type specimen of *orizabae* was not examined by Carl, who redescribed (1902, 1903) many of DeSaussure's polydesmidan species, and was perhaps lost by the time he was engaged at the Geneva museum.

Neoleptodesmus sumichrasti (Humbert & DeSaussure)

Polydesmus (Oxyurus) Sumichrasti Humbert & DeSaussure, 1869, Rev. & Mag. Zool., 21: 151. ♂ HT (MHNG) from Orizaba, Veracruz, Mexico.

Neoleptodesmus sumichrasti: Carl, 1903, Revue suisse Zool., 11: 558, fig. 22.

Neoleptodesmus vermiformis (DeSaussure)

Polydesmus (Strongylosoma) vermiformis DeSaussure, 1859, Linnaea Entom. 13: 326. Location of ♂ HT unknown, originally in MHNG, from ".....versant oriental de la Cordillère du Mexique."

?*Neoleptodesmus vermiformis*: Carl, 1903, Revue suisse Zool., 11: 557 (combination implied: "Hierher gehören.....vielleicht auch *L. vermiformis*.")

It is curious that DeSaussure & Humbert did not mention *vermiformis* in proposing the several new related taxa, with scarcely any larger paranota, from the same geographic area in their 1869 monograph.

Genus **Pararhachistes** Pocock

Pararhachistes Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 177. Type species: *P. elevatus* Pocock, by original designation.

Three species, western Mexico (Guerrero)

Synomymized with *Neoleptodesmus* by Kraus (1954).

Removed from genus: *P. potosinus* Chamberlin, 1943 (see *Strongylodesmus); P. galaneae* Chamberlin, 1943 (see *Ceuthauxus).*

Pararhachistes amblus Chamberlin

Pararachistes [*sic!*] *amblus* Chamberlin, 1942, Bull. Univ. Utah, 33(4): 13, figs. 21, 22. ♂ HT (?USNM) from Cueva de Jutxlahuaca, Colotipla, Guerrero, Mexico.

Pararhachistes elevatus Pocock

Pararhachistes elevatus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 178, pl. XIII, figs. 7-7d, pl. XIV, figs. 1-1c. Location of type material unknown, from Omilteme (=Omiltemi), Guerrero, Mexico.

Pararhachistes vertebratus Pocock

Pararhachistes vertebratus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 178, pl. XIII, figs. 6-6c. Location of type materal unknown, from Amula, Guerrero, Mexico.

Genus **Rhachidomorpha** DeSaussure

Polydesmus (Rhachidomorpha) DeSaussure, 1860, Mém. Soc. Hist. Phys. Nat. Genè ve, 15: 326. Type species: *P.(R.) tarascus* DeSaussure, by monotypy .

Polydesmus (Rachidomorpha) Humbert & DeSaussure, 1869, Rev. & Mag. Zool., 21: 152. – DeSaussure & Humbert, 1872, Miss. Sci. Mexique, Zool., (6) 2: 37.

Rhachis (Microrhachis) Carl, 1903, Revue suisse Zool. 11: 556. Type species: *Polydesmus (Rachidomorpha) uncinatus* Humbert & DeSaussure [= *P. (R.) aduncus* Humbert & DeSaussure, 1869] by original designation.

Rhachidomorpha: Attems, 1898, Denks. Akad. Wiss. Wien, 68: 410. – Pocock, 1909, Biol. Centr.-Amer, Diplopoda, p. 174.

Two species, eastern Mexico.

Rhachidomorpha adunca DeSaussure & Humbert

Polydesmus (Rachidomorpha) uncinatus Humbert & DeSaussure, 1869, Rev. & Mag. Zool., 21: 152. ♂ ♀ ST (MHNG) from "Mexico, Cordiliera orientalis." Preoccupied by *Polydesmus*

(Euryurus) uncinatus Peters, 1864.

Polydesmus (Rachidomorpha) uncinatus: DeSaussure & Humbert, 1872, Miss. Sci. Mexique, Zool., (6): 2: 38, pl. I, figs. 14a-c. Type data given as "le Mexique; Monte Azul, Cerro de Azcamela, Sierra de Agua, dans la Cordillère orientale."

Polydesmus (Rachidomorpha) aduncus, 1872, Miss. Sci. Mexique, Zool. (6): 2: 158. New name to replace *Polydesmus (Rachidomorpha) uncinatus* Humbert & DeSaussure, 1869, *ipso facto* with the same type specimen(s).

Rachis (Microrhachis) uncinatus: Carl, 1903, Revue suisse Zool., 11: 556, fig. 15.

Rhachidomorpha adunca: Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 175. – Causey, 1973, Bull. Assoc. Mexican Cave Stud., 5: 113 (record for Veracruz).

Carl did not specify from which locality came the specimen that he illustrated in 1903. I do not know the present status of the type material of this species.

Rhachidomorpha tarasca (DeSaussure)

Polydesmus (Rhachidomorpha) tarascus DeSaussure, 1860, Mèm. Soc. Hist. Phys. Hist. Nat. Genève, 15: 327, pl. 4, fig. 24a-d. ♂ STs (MHNG) from Cordova, Veracruz, Mexico.

Genus **Rhachodesmus** Cook

Rachis DeSaussure, 1859, Linnaea entom., 13: 326. Type species: *Polydesmus (Rachis) viridis* DeSaussure, 1859, by monotypy. Preoccupied by *Rachis* Albers, 1850.

Rhachodesmus Cook, 1895, Ann. New York Acad. Sci., 9: 4. Proposed to replace *Rachis* DeSaussure, *ipso facto* with the same type species.

Two species, Mexico (Veracruz and Oaxaca).

Rhachodesmus digitatus Causey

Rhachodesmus digitatus Causey, 1973, Bull. Assn. Mexican Cave Stud. 5: 112, figs. 11-14. ♂ HT (USNM) from "Milliped Cave", eight km north of Huautla, Oaxaca, Mexico.

Rhachodesmus viridis (DeSaussure)

Polydesmus (Rachis) viridis DeSaussure, 1859, Linnaea entom., 13: 326; 1860, Mém. Soc. Phys. Hist. Nat. Genève, 15: 330, pl. 3, fig. 19. ♂ HT (MHNG) from "le Mexique. Tuxtla".

Polydesmus (Rhachis) viridis: DeSaussure & Humbert, 1872, Miss. Sci. Mexique, Zool., (6) 2: 55.

Rhachodesmus viridis: Cook, 1895, Ann. New York Acad. Sci., 9: 4 (combination implied by proposal of *Rhachodesmus* as a replacement of the monotypic taxon *Rachis*).

Pocock (1909: 177) and Loomis (1968: 40) cite "Orizaba" as type locality for this species. However, the original description mentions only "Tuxtla" as stated above, and the only specimen remaining in the Geneva museum is labeled "Tuxtlant" (obviously a clerical error). In 1860 DeSaussure stated "Le versant oriental de la Cordillère du Mexique. J'en ai pris deux individus ♂ à Orizaba." It is curious that Carl, who redescribed a number of DeSaussure's rhachodesmid types, passed over *viridis* without comment.

W. T. Keeton obtained the Tuxtla specimen on loan and prepared a full redescription and drawings of the gonopods, all of which came into my hands following his demise in 1975. It is clear, from this material, that the specimen labeled "Ost-Cordilleren von Mexico" in the Vienna museum described by Attems in 1898 is conspecific, possibly even part of the type series obtained through gift or exchange with DeSaussure.

Genus **Strongylodesmus** DeSaussure

Strongylodesmus DeSaussure, 1859, Linnaea Entom. 13: 327. Type species: *Strongylodesmus cyaneus* DeSaussure, 1859, by monotypy. – Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 172. – Loomis, 1968, Bull. U. S. Nat. Mus. 266: 40.

Four species, Mexico.

Removed from genus: *S. harrisoni* Causey, 1971 (see *Mexidesmus); S. granulatus* Loomis, 1966 (see *Chromodesmus*).

Strongylodesmus conspicuus Causey

Strongylodesmus conspicuus Causey, 1973, Bull. Assoc. Mexican Cave Stud. 5: 113, figs. 15, 16. ♂ HT (USNM) from Rancho del Cielo, seven km northwest of Gómez Fariás, Tamaulipas, Mexico.

Range: Vicinity of Gómez Fariás, Tamaulipas, south to Xilitla, San Luis Potosí.

Strongylodesmus cruzanus (Chamberlin)

Ceuthauxus cruzanus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 51. ♂ HT (USNM) from "near Fortin" (presumably El Fortín de las Flores), Veracruz, Mexico.

Identity of this name with *S. cyaneus* seems highly probable.

Strongylodesmus cyaneus DeSaussure

Strongylodesmus cyaneus DeSaussure, 1859, Linnaea Entom., 13: 327; 1860, Mém. Soc.Phys. Hist. nat. Genève, 15: 337, pl. 3, fig. 20. ♂ HT (MNHG) from Orizaba, Veracruz, Mexico.. – Carl, 1903, Revue suisse Zool., 11: 555; figs. 10, 11.

Strongylodesmus geddesi Pocock

Strongylodesmus geddesi Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 173, pl. XIII, figs. 5-5c.

Location of type material unknown, from "Mexico" without further locality.–Causey, 1973, Bull.Assoc. Mexican Cave Stud. 5: 114.

Range: Recorded from adjacent areas in Hidalgo, Veracruz, and San Luis Potosí.

Genus **Tancitares** Chamberlin

Tancitares Chamberlin, 1942, Proc. Biol. Soc. Washington, 55: 58. Type species: *T. michoacanus* Chamberlin, by original designation.

Monotypic, Mexico (Michoacan)

Tancitares michoacanus Chamberlin

Tancitares michoacanus Chamberlin, 1942, Proc. Biol. Soc. Washington, 55: 58, fig. 7. ♂ HT (USNM) from Pedregal, Tancítaro, Michoacan, Mexico.

Genus **Teinorhachis** Loomis

Teinorhachis Loomis, 1961, Proc. U. S. Nat. Mus., 113: 94. Type species: *T. tenuis* Loomis, by original designation.

Monotypic. Guatemala.

Teinorhachis tenuis Loomis

Teinorhachis tenuis Loomis, 1961, Proc. U. S. Nat. Mus. 113: 95, figs. 3c-h. ♂ HT (USNM) originally stated to have come from Panama, later (1964) corrected to Amaya, between Corinto and Chinandega, Dept. Chinandega, Nicaragua.

Genus **Unculabes** Causey

Unculabes Causey, 1971, Bull. Assoc. Mexican Cave Stud. 4: 31. Type species: *U. crispus* Causey, by original designation. – Shear, 1973, Accad. Naz. Lincei, Prob. Att. Sci. Cult., 171: 263 (key to five species).

Five species, eastern Mexico.

Unculabes arganoi Shear

Unculabes arganoi Shear, 1974, Accad. Naz. Lincei Prob. Att. Sci. Cult., 171(2): 265, figs. 39-44. ♂ HT (MCZ) from Cueva del Madroño at El Lolo (?Lobo), Queretero, Mexico.

Unculabes causeyae Shear

Unculabes causeyae Shear, 1974, Accad. Naz. Lincei, Prob. Att. Sci. Cult. 171(2): 264, figs. 35-38. ♂ HT (MCZ) from Cueva Chica de la Perra, eight km northwest of Goméz Fariás, Tamaulipas, Mexico.

Unculabes columbinus Causey

Unculabes columbinus Causey, 1973, Bull. Assn. Mexican Cave Stud., 5: 118, fig. 23. ♂ HT (USNM) from Sótano de la Golondrinas, 10.5 km southwest of Aquismón, San Luis Potosí, Mexico.

Unculabes crispus Causey

Unculabes crispus Causey, 1971, Bull. Assoc. Mexican Cave Stud. 4: 31, figs. 18-20. ♂ HT (USNM) from Sótano de Huitzmolotitla, two km southwest of Tlamaya (10 km northeast of Xilitla), San Luis Potosí, Mexico.– Shear, 1986, Speleol. Monogr. Texas Mem. Mus., 1: 81 (distribution records).

Unculabes versatilis Causey, 1971, Bull. Assoc. Mexican Cave Stud., 4: 32. ♂ HT (not specified, inferentially USNM) from Cueva de Potrerillos, 1.5 km west of Ahuacatlán, San Luis Potosí, Mexico. Synonymized by Causey, 1973.

Range: Numerous caves in San Luis Potosí, Querétaro, and Tamaulipas (Shear, 1986: 81).

Unculabes porrensis Shear

Unculabes porrensis Shear, 1974, Accad. Naz. Lincei Prob. Att. Sci. Cult. 171(2): 268, figs. 45-49. ♂ HT (MCZ) from Cueva de la Porra, three miles north of Xilitla, San Luis Potosí, Mexico.

Family Tridontomidae Loomis & Hoffman

Tridontomidae Loomis & Hoffman, 1962, Proc. Biol. Soc. Washington, 75: 146.

Two genera, Guatemala (vicinity of Senahú, Dept. Alta Verapaz).

The status of this taxon as separable from the Rhachodesmidae requires a reconsideration.

Genus **Aenigmopus** Loomis & Hoffman

Aenigmopus Loomis & Hoffman, 1962, Proc. Biol. Soc. Washington, 75: 151. Type species: A. alatus Loomis & Hoffman, by original designation.

One species: Guatemala.

Aenigmopus alatus Loomis & Hoffman

Aenigmopus alatus Loomis & Hoffman, 1962, Proc. Biol. Soc. Washington, 75: 152, figs. 14-21. ♂ HT (USNM) from Seamay, near Senahu, Dept. Alta Verapaz, Guatemala.

Genus **Tridontomus** Loomis & Hoffman

Tridontomus Loomis & Hoffman, 1962, Proc. Biol. Soc. Washington, 75: 146. Type species: *T. procerus* Loomis & Hoffman, by original designation.

Two species: Guatemala.

Tridontomus loomisi Shear

Tridontomus loomisi Shear, 1977, Accad. Naz. Lincei, Prob. Att. Sci. Cult., 171: 241, figs. 14-18. ♂ HT (AMNH) from Cueva Seamay, near Senahu, Dept. Alta Verapaz, Guatemala.

Tridontomus procerus Loomis & Hoffman

Tridontomus procerus Loomis & Hoffman, 1962, Proc. Biol.Soc. Washington, 75: 148, figs. 1-13, 22. ♂ HT (USNM) from Sepacuite, Dept. Alta Verapaz, Guatemala.

Suborder Paradoxosomatidea Daday

Strongylosomidi Brolemann, 1916, Ann. Soc. entom. France, 84: 526.

Strongylosomidea Attems, 1914, Arch. Naturg., 80(A4): 184.

Paradoxosomatidea Hoffman, 1967, Rev. Zool. Bot. afr., 86: 202.

I am no longer convinced that this taxon is monophyletic, in its traditional sense.

Family Paradoxosomatidae Daday

Paradoxosomatidae Daday, 1889, Természetr. Füz., 12: 135. – Jeekel, 1968, Classification and Distribution of the family Paradoxosomatidae, pp. 5 et seq. (hereinafter cited simply as "Paradoxosomatidae").

Strongylosomatidae Cook, 1895, Ann. New York Acad. Sci., 9: 5.

Strongylosomidae Attems, 1914, Arch. Naturg. 80(A4): 184. – Attems, 1937, Das Tierreich, 68: 24 et seq. (monograph of the family).

About 160 genera, worldwide except the Nearctic Region, with the greatest diversification in the Indo-australian region. Members of several genera have achieved nearly global distribution through anthropogenic means.

Jeekel distinguished 20 tribes, some of which may, in the light of recent discoveries, have to be combined. Three tribes represented in our area are placed in the nominate subfamily Paradoxosomatinae, the fourth (Australiosomatini) in the Australiosomatinae..

Tribe Australiosomatini Brolemann

Australiosomini Brolemann, 1916, Ann. Soc. entom. France, 84: 540. – Jeekel, 1968, "Paradoxosomatidae" p. 20, 126.

14 genera, Australia. One species dispersed through the Pacific region by commerce.

Genus **Akamptogonus** Attems

Akamptogonus Attems, 1914, Arch. Naturg. 80(A4): 221. Type species: *Polydesmus Novarae* Humbert & DeSaussure, 1869, by original designation.

Tricladosoma Brolemann, 1916, Ann. Soc. entom. France, 84: 538, 591. Type species: *Polydesmus Novarae* Humbert & DeSaussure, 1869, by original designation. Synonymized by Attems, 1937.

Zelanodesmus Chamberlin, 1920, Bull. Mus. Comp. Zool., 64: 128. Type species: *Z. rotornanus* Chamberlin, by original designation. Synonymized by Jeekel, 1964.

One species, Australia, also widely dispersed in the Pacific region..

Akamptogonus novarae (Humbert & DeSaussure)

Polydesmus Novarae Humbert & DeSaussure, 1869, Verh. zool.-bot. Gesellsch. Wien, 19: 689. ♂ HT (NMW) from Auckland, New Zealand.

Strongylosoma Novarrae: Attems, 1898, Denks. Akad. Wien, 67: 305, fig. 58.

Orthomorpha triaina Attems, 1911, in: Fauna Sud-West Australia, 3: 178, fig. 42. ♂ HT (NMW) from Albany, Southwest Australia. Synonymized by Attems, 1914.

Akamptogonus novarrae: Attems, 1914, Arch. Naturg. 80 (A4): 223; 1937, Das Tierreich, 68: 254, fig. 315.

Tricladosoma novarae: Brolemann, 1916, Ann. Soc. entom. France, 84: 538, 591.

Zelanodesmus rotornanus Chamberlin, 1920, Bull. Mus. Comp. Zool. 64: 108. ♂ HT (MCZ) from Rotorna [?Rotorua], New Zealand]. Synonymized by Jeekel, 1964.

Zelanodesmus australianus Chamberlin, 1920, Bull. Mus. Comp. Zool., 64: 109. ♂ HT (MCZ) from Sutherland, New South Wales, Australia. Synonymized by Jeekel, 1964.

Akamptogonus novarae: Jeekel, 1964, Nova Guinea, Zool., 29: 106. – Hoffman, 1980, Wasmann Journ. Biol., 37: 55, fig. 1.

Range: Thought to be southeastern Australia, introduced into New Zealand, Chatham Island, Southwest Australia, Hawai'i, and San Francisco, California.

Tribe Catharosomatini Brolemann

Catharosominae Brolemann, 1929, Mém. Soc. zool. France, 29: 12.

Catharosomatini Jeekel, 1968, "Paradoxosomatidae" p. 115.

12 (?11) genera, Neotropical Region north as far as Costa Rica.

Genus **Mestosoma** Silvestri

Mestosoma Silvestri, 1897, Boll.. Mus. Zool. Anat. comp. Univ. Torino, 12(283): 3. Type species: *Strongylosoma salvadorii* Silvestri, 1895, by original designation.

Pernambucosoma Schubart, 1939, Zool. Anz., 128: 82. Type species: *P. marthae* Schubart, by original designation. Synonymized by Jeekel, 1963.

Titschackia Kraus, 1956, Senckenberg. biol., 37: 405. Type species: *T. andina* Verhoeff, 1941, by original designation. Validation of the unavailable name *Titschackia* Verhoeff, 1941. Synonymized by Jeekel, 1963.

Hylaiopus Verhoeff, 1941, in Titschack (ed.): Beiträge zur Fauna Perus, 1: 25. Type species: *H. sphinx* Verhoeff, by monotypy. Synonymized by Jeekel, 1963.

Perusoma Verhoeff, 1941, in Titschack (ed.): Beiträge zur Fauna Perus, 1: 25. Type species: *P. recurvatum* Verhoeff, by monotypy. Synonymized by Jeekel, 1963.

Nearctoma Chamberlin, 1952, Ann. Entom. Soc. America, 45: 582. Type species: *N. cuzconum* Chamberlin, by original designation. Synonymized by Jeekel, 1963.

Paracatharosoma Kraus, 1959, Senckenberg. biol. 40: 263. Type species: *P. unicum* Kraus, by original designation. Synonymized by Jeekel, 1963.

About 75 nominal species, South America, north as far as Costa Rica, possibly introduced into Dominica, Lesser Antilles.

Some of the foregoing names may be revived for disjunct species-groups, and surely many of them will be shown to be superfluous. Chamberlin's rationale in proposing *Nearctoma* for a species from southern Peru cannot be imagined.

Mestosoma isthmianum Loomis

Mestosoma isthmianum Loomis, 1961, Proc. U. S. Nat. Mus., 113: 107, fig. 6b. ♂ HT (USNM) from Alahjuela, Prov. Panama, Panama.

Range: Several localities in the Canal Zone and adjacent Panama Province (Loomis, 1964).

Mestosoma moorei Hoffman

Mestosoma pulvillatum Attems, 1933, Ann. Naturh. Mus. Wien, 46: 257 (misidentification).

Mestosoma moorei Hoffman, 1977, Stud, Neotrop. Fauna Environ., 12: 210, figs. 1, 2, 7. ♂ HT (VMNH) from Finca Taboga, ca. 20 km southwest of La Cañas, Prov. Guanacaste, Costa Rica.

Mestosoma semirugosum (Pocock)

Strongylosoma semirugosum Pocock, 1888, Ann. Mag. Nat. Hist. (6) 2: 477. ♂ ST (BMNH) from Dominica, Lesser Antilles.

Mestosoma semirugosum: Jeekel, 1963, Stud. Fauna Suriname, 4(11): 32, 38. – Hoffman, 1977, Stud. Neotrop. Fauna Environ., 12: 213, figs. 5, 6, 9. Designation, and gonopod drawings, of lectotype.

Range: So far as know, confined to the island of Dominica, into which possibly introduced from some as yet unidentified mainland source area.

Tribe Orthomorphini Brolemann

Orthomorphini Brolemann, 1916, Ann. Soc. entom. France, 84: 583.

Nine (?) genera, southeast Asia, East Indies, Philippine Islands. One species has been widely dispersed by commerce through the tropics.

Genus **Asiomorpha** Verhoeff

Asiomorpha Verhoeff, 1939, Zool. Anz., 127: 117. Type species: *Polydesmus coarctatus* DeSaussure, 1860, by original designation. – Hoffman, 1980, Classification of the Diplopoda, p. 169. Synonymized by Attems, 1940..

Brasilogonopus Verhoeff, 1943, Arq. Mus. Nac. (Rio de Janeiro), 37: 274. Type species: *B. attemsi* Verhoeff, by original designation. Synonymized by Jeekel, 1963.

Oxidus (Orthomorphina) Kraus, 1958, Senckenberg. biol. 39: 100. Type species: *Polydesmus coarctatus* DeSaussure, 1860, by original designation. Synonymized by Jeekel, 1963.

One species, synanthropically dispersed in the tropics of both hemispheres, presumably native to some place in southeast Asia..

Observing a fairly inclusive generic concept, Jeekel (1968: 45) admitted 13 species, including *coarctata*, to the genus *Orthomorpha*, and stated that he could see no reason for recognition of *Asiomorpha* as a valid genus. This opinion is shared by Golovatch (1997) in a detailed review of *Orthomorpha* that encompasses 42 species. In my view, the simple gonotelopodite (with a single, rounded apical lobe) contrasts *coarctata* against the numerous other species referred to *Orthomorpha* which have typically three apical processes.

Asiomorpha coarctata (DeSaussure)

[Entries for junior synonyms are provided only for names with type localities in the area of this checklist. Jeekel (1963) provides a complete list of references for occurrences in the New World].

Polydesmus (Paradesmus) coarctatus DeSaussure, 1860, Mém.Soc. Phy. Hist. natur. Genève, 15: 297, pl.18, fig. 18. ST (?MHNG) from Cayenne, Guyane française.

Strongylazoma [*sic*!] *poeyi* Bollman, 1887, Entom. Americana, 3: 82. ST (?USNM) from Havana, Cuba. (the misspelling was corrected in the 1893 collection of Bollman publications, pp. 70, 86). Synonymyzed by Pocock, 1894.

Strongylosoma coarctatum: Pocock, 1894, Journ. Linnean Soc. London, 24: 512.

Orthomorpha (Orthomorpha) coarctata: Attems, 1937, Das Tierreich, 68: 62.

Asiomorpha coarctata: Verhoeff, 1939, Zool. Anz., 127: 117.

Orthomorpha coarctata: Jeekel, 1963, Stud. Fauna Suriname, 4(11): 22.

Range: Native to an unidentified region in southeast Asia, now distributed by human agencies throughout the tropical parts of the world, and a successful colonizer particularly of islands. Central & southern Florida; Texas, Louisiana. Virtually all of the West Indies; but only marginally established in Central America: Panama Canal Zone; coastal lowlands of Costa Rica and Guatemala only; but to 700 m. ASL in El Salvador. Found in Prov. Limón, C. R. in 1921 by W. M. Wheeler, but not in 1937 by H. F. Loomis despite longer and more intensive search.

Tribe Sulciferini Attems

Sulciferinae Attems, 1898, Denkschr. Akad. Wien, Math.-Naturh. Klasse, 68: 345.

Anoplodesminae Pocock, 1909, Biol. Centr.-Amer., Diplopod., p. 110.

Sulciferini Jeekel, 1968, "Paradoxosomatidae", p. 71, 128.

About 25 genera, east Asia, Indonesia, Japan, north and east Africa, Iberian peninsula. Several species have been widely dispersed through commerce, two of them occur in the Western Hemisphere.

Genus **Chondromorpha** Silvestri

Chondromorpha Silvestri, 1897, Ann. Soc. entom. Belgique, 41: 356. Type species: *C. Severini* Silvestri, by monotypy.

Dasomus Chamberlin, 1941, Proc. Entom. Soc. Washington, 43: 34. Type species: *D. bicolor* Chamberlin, by original designation. Synonymized by Jeekel, 1963.

Xaymacia Loomis, 1948, Journ. Washington Acad. Sci., 38: 187. Type species: *X. granulata* Loomis, by original designation. Synonymized by Jeekel, 1963.

About 12 nominal species, southeast Asia; one widely dispersed through commerce.

Chondromorpha xanthotricha (Attems)

Prionopeltis xanthotricha Attems, 1898, Denks. Akad. Wien, 67: 359, fig. 115. ♂ HT (NMW) from Mauritius.

Chondromorpha xanthotricha: Attems, 1937, Das Tierreich, 68: 111, fig. 146. – Jeekel, 1963, Stud. Fauna Suriname, 4: 24.

Dasomus bicolor Chamberlin, 1941, Proc. Entom. Soc. Washington, 43: 34, fig. 4. ♂ HT (USNM) from an unspecified locality in Jamaica. Synonymized by Jeekel, 1963.

Xaymacia granulata Loomis, 1948, Journ. Washington Acad. Sci., 38: 187, figs. 3-6. ♂ HT (USNM) from Caymanas, Rio Cobre, St. Catherine Parish, Jamaica. Synonymized with *C. kelaarti* by Loomis, 1950, with *xanthotricha* by Jeekel, 1963.

Range: Original area uncertain, probably southern India and/or Sri Lanka. Widely distributed through agricommerce: Luzon, New Caledonia, Samoa, Fiji, Mauritius; in the Neotropics known from Guadeloupe, Jamaica, and Suriname. As with many other synanthropic millipeds, colonization appears most successful in islands.

Genus **Oxidus** Cook

Oxidus Cook, 1911, Proc. U. S. Nat. Mus., 40: 628. Type species: *Fontaria gracilis* C. L. Koch, 1847, by original designation.– Jeekel, 1963, Stud. Fauna Suriname, 4: 19.

Orthomorpha (Kalorthomorpha) Attems, 1914, Arch. Naturg. 80(A4): 191. Type species: *Fontaria gracilis* C. L. Koch, 1847, by original designation.

Four species, Japan, Riu Kiu islands, one species now almost worldwide in temperate regions.

Oxidus gracilis (C. L. Koch)

Fontaria gracilis C. L. Koch, 1847, Syst. Myriap., in: Krit. Rev. Insectenf. Deutschlands, 3: 142; 1863, Die Myriapoden, 2: 151, fig. 173. Location of type material, if extant, unknown, from "Puloloz".

Paradesmus dasys Bollman, 1887, Proc. U. S. Nat. Mus., 10: 619. ST (USNM?) from Baltimore, Maryland. Synonymized by Cook, 1911.

Orthomorpha gracilis: Bollman, 1893, Bull. U. S. Nat. Mus., 46: 197.

Orthomorpha dasys: Bollman, 1893, Bull. U. S. Nat. Mus., 46: 197.

Kepolydesmus sontus Chamberlin, 1910, Ann. Entom. Soc. America, 3: 247, pl. 38, figs. 5-7. Type material lost, from Los Angeles, California. Synonymized by Brolemann, 1916.

Oxidus gracilis: Cook, 1911, Proc. U. S. Nat. Mus., 40: 631.

Range: Original native range uncertain, but probably Japan since the other three members of the genus also occur in Japan and the Riu Kiu islands. At present, nearly worldwide in temperate countries and at higher elevations in the tropics. Essentially continent wide in North America, initially in greenhouses and urban gardens, but now acclimatized and present in astronomical numbers in many parts of eastern United States (e.g., Virginia, Tennessee, Indiana) as part of the forest fauna adjacent to urbanized or cultivated areas. Widespread in Puerto Rico. Collected at 900 m. ASL in El Salvador; and in the high central valley of Costa Rica (but not found in the coastal lowlands by Loomis).

Suborder Polydesmidea Leach

Polydesmidi Brolemann, 1916, Ann. Soc ent. France, 84: 528, 586.

Polydesmidea Hoffman, 1980, Classification of the Diplopoda, p. 172 et seq. – Simonsen, 1990, Dr. scient. Thesis, Univ. Bergen, p. 33 et seq.

In many respects, this extensive aggregation of generally not well-defined groups of millipeds may be considered the *bête-noire* within the Polydesmida. In particular, the numerous tropical forms that appear referable here are mostly undersampled and inadequately described; as they become better known major reorganization of the Polydesmidea will almost certainly result. Brolemann's original perception was remarkably clairvoyant for its time. My 1980 arrangement was little more than an attempt to integrate subsequent information and was never intended to represent a thoughtful synthesis.

Simonsen (1990) produced a cladistic analysis, admirable in its audacity and comprehension, but despite its frequent good insights one flawed by too much assumption of the reality of pre-existing taxa and too little familiarity with the global fauna. It is my conviction that the cladistic approach is effective only when applied to groups which have already been delimited and refined by intensive revisionary studies which already demonstrated their monophyly. To extract presumably diagnostic group autapomorphies from a few examples of large, heterogeneous, and poorly-known taxa requires the investment of too much faith in highly fallible systems; it is something done in reverse order. Yet Simonsen is to be applauded for confronting a problematical situation avoided for decades by specialists with far more actual experience, and providing a much-needed baseline.

I have followed the structure of my 1980 classification, in summarizing these difficult families, for no better reason than consistency with other orders. Where relevant, I have been at pains to reference Simonsen's findings and suggestions, which should be consulted in the original by interested parties. In the same sense, I have chosen to omit the superfamily categories, as possibly only illusory, certainly premature.

Family Polydesmidae Leach

Polydesmides Leach, 1815, Trans. Linnean Soc. London, 11: 381.

Polydesmidae [first use in modern sense] Cook, 1895, Ann. New York Acad. Sci., 9: 5. – Brolemann, 1916, Ann. Soc. ent. France, 84: 568. – Attems, 1940, Das Tierreich, 70: 1-162. – Hoffman, 1980, Classification of the Diplopoda, p. 172.

About 25 nominal genera, Holarctic Region.

Genus **Bidentogon** Buckett & Gardner

Bidentogon Buckett & Gardner, 1968, Pan-Pacific Entom., 44: 198. Type species: *B. helferorum* Buckett & Gardner, by original designation .– Shear, 1972, Proc. Biol. Soc. Washington, 85: 489.

Two species, California.

Bidentogon californicus (Chamberlin)

Brachydesmus californicus Chamberlin, 1918, Pomona Coll. Journ. Ent. Zool., 10: 9. ♂ and ♀ ST (MCZ) from Sacramento, Sacramento Co., California.

Bidentogon californicus: Shear, 1972, Proc. Biol. Soc. Washington, 85: 490, figs. 4, 5.

Bidentogon helferorum Buckett & Gardner

Bidentogon helferorum Buckett & Gardner, 1968, Pan-Pacific Entom., 44: 198, figs. 1-7. ♂ HT (UCD) from one mile north of Mendocino, Mendocino Co., California. – Shear, 1972, Proc. Biol. Soc. Washington, 85: 490, figs. 1-3.

Range: Central California: Alameda and Mendocino counties.

Genus **Calianotus** Shelley

Calianotus Shelley, 1997, Myriapodologica, 4: 60. Type species: *Brachydesmus (Brachydesmus) yosemitensis* Causey, 19543, by original designation.

Three species, California.

Calianotus bituberculatus (Loomis)

Brachydesmus bituberculatus Loomis, 1960, Journ. Kansas Entom. Soc., 33: 57, figs. 1-3. ♂ HT (USNM) from Altamont Pass, Niles Canyon, Alameda Co., California.

Calianotus bituberculatus: Shelley, 1997, Myriapodologica, 4: 63, figs. 5-7.

Range: Eastern side of San Francisco Bay, Alameda and Contra Costa counties, California (map, Shelley, 1997, fig. 1).

Calianotus sastianus (Chamberlin)

Polydesmus sastianus Chamberlin, 1910, Ann. Entom. Soc. America, 3: 251, pl. 39, figs. 2-3. Original type material, from Shasta Springs, Siskiyou Co., California, lost. ♂ NT (UCD) from eight miles south of Dunsmuir, Shasta Co., California, designated by Shelley, 1997.

Calianotus sastianus: Shelley, 1997, Myriapodologica, 4: 63, figs. 8-9.

Range: Vicinity of Mount Shasta, northern California (map, Shelley, 1997, fig. 1).

Calianotus yosemitensis (Causey)

Brachydesmus (Brachydesmus) yosemitensis Causey, 1954, Pan-Pacific Entom., 30: 224, fig. 5. Original type material lost (not at AMNH or elsewhere), from Vernal Falls, Yosemite National Park, Mariposa Co., California.

Calianotus yosemitensis: Shelley, 1997, Myriapodologica, 4: 61, figs. 2-4.

Range: Western slopes of the Sierra Nevada Mountains, in Calaveras, Mariposa, Madera, Fresno counties, California (map, Shelley 1997, fig. 1).

Genus **Polydesmus** Latreille

Polydesmus Latreille, 1802/1803, Hist. nat., gén. Part. Crust. Insect., 3: 44. Type species: *Julus complanatus* Linnaeus, 1761, by monotypy. – Attems, 1940, Das Tierreich, 70: 3-80.

Brachydesmus Heller, 1858, Sitzungs.-ber. Akad. Wiss. Wien, 26: 318. Type species: *B. subterraneus* Heller, by monotypy. Synonymized by Hoffman, 1980..

Alpertia Loomis, 1972, Florida Entom., 55: 145. Type species: *A. lunatifrons* Loomis, by original designation. Described as a new genus in the family Trichopolydesmidae. Synonymized by Shelley, 1996.

About 300 named taxa (many of them surely superfluous) have been recognized in the genus in its present sense. Only a comprehensive revision of the entire family can clarify the status of the many genera and subgenera associated with the nominate genus. The group is centered in western Europe (especially the Balkan Peninsula); several species are anthropochoric and have been established in other parts of the world.

In the following entries, no attempt has been made to include the full spectrum of nomenclatorial confusion that enshrouds nearly every species, although some clarifications seemed inevitable.

I already stated in 1980 my conviction that *Brachydesmus* can be maintained as a separate taxon on the basis of gonopodal characters only. The endemic American species described at various times in *Brachydesmus* have in recent years been relocated into different genera; see *Calianotus, Bidentogon, Phreatodesmus,* and *Utadesmus.*

Polydesmus angustus Latzel

Polydesmus complanatus var. *angustus* Latzel, 1884, Bull. Soc. Amis Sci. Nat. Rouen, (2) 19: 262. Type material (?NMW) from "Gallia septentrionali-occidentalis (Eure)", Normandie, France.

Polydesmus complanatus forma *angustus*: Brolemann, 1910, Arch. Zool. Expér. Gén. (5) 5: 349, figs. 13-18.

Polydesmus verhoeffi Lohmander, 1925, Göteborgs Vetensk. Handl. 30: 18 (new name for *Polydesmus complanatus, sensu* Verhoeff *et auct.alia*, nec Linnaeus 1758, no type or type locality designated).

Polydesmus angustus: Schubart, 1934, Tierwelt Deutschl., 28: 158, fig. 259 (taxonomic-nomenclatorial review). – Jawlowski, 1930, Frag. Faun. Mus. Zool. Polonici, 1: 181. – Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 68.

Polydesmus verhoeffi angustatus [!] Attems, 1940, Das Tierreich, 70: 12.

Polydesmus chapultepecus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 69, fig. 170. ♂ HT (USNM) from Chapultepec Park, Distrito Federal, Mexico. Synonymized by Loomis, 1968.

Alpertia lunatifrons Loomis, 1972, Florida Entom., 55: 145, Imm. ♂ HT (USNM) from Spokane, Washington. Synonymized by Shelley, 1996.

Range: Western Europe, whence a considerable number of subspecific taxa have been recognized, some are probably valid as geographic races, others are likely strict synonyms. A revision is eminently desireable.

In the New World, recorded from Louisiana (Chamberlin), Nova Scotia (Shelley, 1988), Washington and British Columbia (Shelley, 1996) and Mexico City (Jawlowski, 1930)..

Polydesmus complanatus complanatus (Linnaeus)

Julus complanatus Linnaeus, 1761, Fauna Svecica, ed. 2, p. 502. Type material not known to exist, type locality assumed to be Sweden.

Polydesmus complanatus: Latreille, 1802/1803, Hist. Nat. gén,. part. Crust. Insect., 3: 44. – Lohmander, 1925, Göteborgs Vetensk. Handling. 30: 16, figs. 1, 2.

Polydesmus complanatus: Chamberlin, 1951, Great Basin Nat., 11: 27.

Range: Eastern Europe, from Norway and Finland south through Germany to western Poland where merging into the larger southern subspecies *P. c. illyricus* Verhoeff (map, Hoffman & Lohmander, 1968, fig. 51). Introduced into and apparently acclimatized in eastern United States (e.g., New Jersey).

For some decades the name *complanatus* was misapplied to other Europe species (including *angustus*) and conversely, other names (e.g., *illyricus)* were used erroneously for the Linnaean *complanatus*. The true identity of the latter was apparently first stated by von Porat (1870) and later convincingly ratified by Lohmander (1925). A good resume of the earlier confusion was provided by Schubart (1934).

Polydesmus denticulatus Koch

Polydesmus denticulatus Koch, 1847, Krit. Rev. Insectenf. Deutschl., 3: 135; 1863, Die Myriapoden, 2: 2, pl. 62, fig. 127. Type material unknown, thought to have come from Germany.– Palmén, 1952, Ann. Zool. Soc. "Vanamo", 15: 14.

Range: Western Europe, Scandinavia south to France and the British Inslands; introduced into Newfoundland, where collected at St. Johns (Palmén 1952). No recent information on the status of this colony is available.

Polydesmus inconstans Latzel

?Scytonotus nodulosus C. L. Koch, 1847, Syst. der Myriapoden, in Panzer, Krit. Rev. Insectenf. Deutschl., etc etc. Type material not known to exist, from "Pensylvanien" without further indication.

Polydesmus inconstans Latzel, 1884, Bull Soc. Amis Sci. nat. Rouen, (2) 19: 269, fig. 3. Type material (?NMW) from Normandie, France.

Polydesmus testi Bollman, 1888, Proc. U. S. Nat. Mus., 10: 617. ♂ HT (?USNM) from Indianopolis, Indiana. Synonymized by Chamberlin & Hoffman, 1958.

Polydesmus socarnius Chamberlin, 1910, Ann. Entom. Soc. America, 3: 252. Original type material lost, from Salt Lake City, Utah. Synonymized by Chamberlin & Hoffman, 1958.

Polydesmus hortus Williams & Hefner, 1928, Bull. Ohio Biol. Surv., 18: 113, fig. 13d. Type material; not known to exist, from Athens Co., Ohio. Synonymized by Jawlowski, 1939.

Polydesmus pronomeutes Chamberlin, 1942, Bull. Univ. Utah, 32(8): 9, fig. 29. ♂ HT (USNM) from Fort Collins, Larimer Co., Colorado. Synonymized by Chamberlin & Hoffman, 1958.

Polydesmus wheeleri Causey, 1950, Ent. News, 61: 197, figs. 6, 7. ♂ HT (ANSP) from Grand Fork, Grand Fork Co., North Dakota. Synonymized by Chamberlin & Hoffman, 1958.

Polydesmus coriaceus [nec von Porat, 1870] most authors prior to Palmén, 1949.

Range: Introduced into northeastern North America and now established in transcontinental urban areas in both Canada and northern United States.

Polydesmus superus (Latzel), new combination

Brachydesmus superus Latzel, 1884, Myr. Öst.-Ung. Monarch., 2: 130, pl. 6, figs. 68, 69. ST (NMW) from Vienna, Austria. – Attems, 1940, Das Tierreich, 70: 120.

Brachydesmus gladiolus Williams & Hefner, 1928, Bull. Ohio Biol. Surv., 18: 113, fig. 12c. Type material not located, from Allen Co., Ohio. Synonymized by Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 64.

Brachydesmus pallidus Loomis, 1939, Bull. Mus. Comp. Zool., 86: 191, fig. 14. ♂ HT (MCZ) from Charleston, Kanawha Co., West Virginia. Synonymized by Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 64.

Brachydesmus dux Chamberlin, 1940, Ent. News, 51: 284, fig. 4. ♂ HT (USNM) from Duke Forest, Durham Co., North Carolina.

Range: General over western Europe, whence many subspecies have been recognized on very tenuous grounds; introduced and now widespread in North America, from Ontario south as far as North Carolina, west to Michigan, in gardens.

Genus **Pseudopolydesmus** Attems

Pseudopolydesmus Attems, 1898, Denks. Akad. Wiss. Wien, 67: 479. Type species: *Polydesmus canadensis* Newport, 1844, by monotypy. – Carl, 1941, Revue suisse Zool., 133: 291. – Chamberlin, 1943, Bull. Univ. Utah, 34(6): 17.

Dixidesmus Chamberlin, 1943, Bull. Univ. Utah, 34(6): 18. Type species: *D. tallulanus* Chamberlin, by original designation. Synonymized by Hoffman, 1974.

12 species, eastern North America.

This is one of the few major North American polydesmoid genera requiring a basic revision. A number of species names are unquestionably superfluous, and the nomenclatorial status of several must be considered. Some taxonomic innovations are introduced in the following treatment, for which confirmation is desireable.

Pseudopolydesmus caddo Chamberlin

Pseudopolydesmus caddo Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 97, fig. 11. ♂ HT (USNM) from five miles northwest of Shreveport, Caddo Par., Louisiana.

Pseudopolydesmus bidens Loomis, 1959, Journ. Washington Acad. Sci., 49: 181, fig. 8. ♂ HT (USNM) from site beside U. S. Hy. 190, between Kinder and LeBlanc, Allen Par., Louisiana. **New synonymy!**

Range: Northwestern Louisiana; eastern Texas; westernmost Tennessee (Reelfoot Lake), presumably general in the lower Mississippi basin.

It is curious that the usually careful Loomis compared his *bidens* only with *P. minor* rather than the very similar *caddo*, described from a nearby locality in Louisiana. Comparison of the original gonopod illustrations shows their essential identity. The gonopod of *caddo* was illustrated from a slightly tilted position, causing the distal lateral telopodite flange to appear more prominent than in the corresponding drawing for *bidens*. The status of *caddo* relative to the very similar *P. neoterus* requires examination; the two taxa may be only subspecifically related, or the names synonymous.

Pseudopolydesmus canadensis (Newport)

Polydesmus canadensis Newport, 1814, Ann. & Mag. Nat. Hist., 13: 265. Imm. ♀ HT (BMNH) from "Albany River, Hudson's Bay", Ontario, Canada.

Polydesmus glaucescens C. L. Koch, 1847, in Panzer: Krit. Rev. Insectenf. Deutschlands, 3: 133; 1863, Die Myriapoden, 1: 59, pl. 26, fig. 51. Location of types, if extant, unknown, labeled only "Nordamerika". **New synonymy**!

Polydesmus branneri Bollman, 1887, Proc. U. S. Nat. Mus., 11: 620. ♂ HT (?USNM) from "Mossy Creek" [now Jefferson City], Jefferson Co., Tennessee. – Loomis, 1943, Bull. Mus. Comp. Zool., 92: 405, fig. 16, pl 1, fig. 4. **New synonymy!**

Polydesmus nitidus Bollman, 1887, Entom. Americana, 3: 45. Location of type material unknown, from Pensacola, Escambia Co., Florida. **New synonymy**!

Polydesmus echinogon Chamberlin, 1942, Bull. Univ. Utah, 32(8): 10, fig. 33. ♂ HT (USNM) from Shawanese [a village on Harvey's Lake], Luzerne Co., Pennsylvania. **New synonymy**!

Polydesmus conlatus Chamberlin, 1943, Proc. Biol. Soc. Washington, 56: 36, fig. 5. ♂ HT (USNM) from Gatlinburg, Sevier Co., Tennessee. Synonymized with *branneri* by Chamberlin & Hoffman, 1958, with *canadensis*, **New synonymy!**.

Dixidesmus sylvicolens Chamberlin, 1943, Bull. Univ. Utah, 34(6): 20, fig. 33. ♂ HT (USNM) from seven miles north of Sylvania, Screven Co.,; Georgia. **New synonymy**!

Dixidesmus christianus Chamberlin, 1946, Proc. Biol. Soc. Washington, 59: 142, fig. 4. ♂ HT (USNM) from Pass Christian, Harrison Co., Mississippi. **New synonymy**!

Dixidesmus catskillus Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, 99: 24, fig. 2. ♂ HT (ANSP) from Catskill, Greene Co., New York. Synonymized with *branneri* by Shelley, 1988, with canadensis. **New synonymy**/.

Dixidesmus phanus Chamberlin, 1951, Great Basin Nat., 11: 27, fig. 1. ♂ HT (USNM) from "Suwanee River", Florida, without further locality. **New synonymy!**

Dixidesmus gausodicrorhachus Johnson, 1954, Chicago Acad. Sci. Nat. Hist. Misc., 137: 1, fig. 1a-d. ♂ HT (USNM) from west side of Garnet Lake, Mackinaw Co., Michigan. Synonymized with *branneri* by Shelley, 1988, with *canadensis*, herein. **New synonymy***!*

Range: Southern Ontario south through Michigan and New York to northern Florida and the Gulf Coast.

Previous considerations of the name *canadensis* have generally associated it with the species called *serratus* Say. Upon examining the holotype in 1960, I was convinced that the paranota retained enough red pigment to refer it that currently known as *branneri* Bollman. The ostensible type locality may be taken *cum grano salis*, probably meaning only that the specimen was obtained through the Hudson's Bay Company along with many other kinds of natural history specimens, and

I take this position until material of a species of *Pseudopolydesmus* has been secured at some point along the Albany River.

The original description of *glaucescens* notes the "weinröthlich" coloration of the paranota, sufficient to associate this name with the Appalachian populations of *canadensis*.

There is substantial geographic variation in size, color, and gonopod characters, more than enough to anticipate that a careful analysis will justify recognition of at least two, possibly three, subspecies of this very widespread taxon: one in the southeastern coastal plain, another in the Appalachians, and a third in the Great Lakes region.

Pseudopolydesmus collinus Hoffman

Pseudopolydesmus collinus Hoffman, 1974, Proc. Biol. Soc. Washington, 87: 346, figs. 1, 2. ♂ HT (VMNH) from "Pinnacles of Dan", ca. four miles southwest of Vesta, Patrick Co., Virginia.

Range: central North Carolina, across southwestern Virginia to eastern Kentucky and (disjunctly?) southern Indiana.

Pseudopolydesmus erasus (Loomis)

Polydesmus erasus Loomis, 1943, Bull. Mus. Comp. Zool., 92: 406, fig. 17; pl. 5, fig. 4 (June). ♂ HT (MCZ) from Huntsville, Madison Co., Alabama.

Dixidesmus tallulanus Chamberlin, 1943, Bull. Univ. Utah, 34(6): 19, fig. 34 (October). ♂ HT (USNM) from a site between Clayton and Tallulah Falls, Rabun Co., Georgia. **New synonymy!**

Dixidesmus penicillus Chamberlin, 1943, Bull. Univ. Utah, 34(6): 19, fig. 35 (October). ♂ HT (USNM) from "North and northwest of Clarkesville", Habersham Co., Georgia. **New synonymy!**

Dixidesmus humilidens Chamberlin, 1943, Bull. Univ. Utah, 34(6): 20, fig. 36 (October). ♂ HT (USNM) from Gainesville, Hall Co., Georgia. Synonymized by Chamberlin & Hoffman, 1958.

Range: Southern part of the Appalachians in Georgia, North Carolina, Tennessee, and Alabama, also to the northwest in Kentucky and southern Illinois.

Pseudopolydesmus euthetus (Chamberlin)

Polydesmus euthetus Chamberlin, 1942, Bull. Univ. Utah, 32(8): 10, fig. 36. ♂ HT (USNM) from Buder Park, one mile southwest of Valley Park, St. Louis Co., Missouri.

Pseudopolydesmus minor (Bollman)

Polydesmus minor Bollman, 1887, Entom. Americana, 4: 2. ♂ HT (?USNM) from Little Rock, Pulaski Co., Arkansas.

Pseudopolydesmus minor: Chamberlin, 1943, Bull. Univ. Utah, 34(6): 18. – Loomis, 1959, Journ. Washington Acad. Sci., 49: 161, fig. 9.

Range: Arkansas, western Tennessee, southern Illinois.

Pseudopolydesmus natchitoches (Chamberlin)

Polydesmus natchitoches Chamberlin, 1942, Bull. Univ. Utah, 32(8): 10, figs. 34, 35. ♂ HT (USNM) from two miles south of Saline, Natchitoches Par., Louisiana.

Pseudopolydesmus natchitoches: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 70.

Pseudopolydesmus neoterus Chamberlin

Polydesmus neoterus Chamberlin, 1942, Bull. Univ. Utah, 32(8): 10, fig. 30. ♂ HT (USNM) from New Orleans, Louisiana.

Pseudopolydesmus neoterus: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus. 212: 70.

Pseudopolydesmus paludicolus Hoffman

Pseudopolydesmus paludicolus Hoffman, 1950, Virginia Journ. Sci. (NS), 1: 222, fig. 4. ♂ HT (USNM) from Sand Bridge, City of Virginia Beach, Virginia.

Range: Extreme southeastern Virginia; Orangeburg Co., South Carolina. This psychrophilic species is doubtless widespread in the Atlantic Coastal Plain.

Pseudopolydesmus paroicus (Chamberlin)

Polydesmus paroicus Chamberlin, 1942, Bull. Univ. Utah, 32(8): 11, figs. 37, 38. ♂ HT (USNM) from 1.5 miles north of Clay, Jackson Par., Louisiana.

Pseudopolydesmus paroicus: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 70.

Pseudopolydesmus pinetorum (Bollman)

Polydesmus pinetorum Bollman, 1888, Entom. Americana, 4: 3. ♂ HT (USNM) from Little Rock, Pulaski Co., Arkansas.

Polydesmus americanus Carl, 1902, Rev. suisse Zool., 10: 611, fig. 37. ♂ HT (MHNG) from "Texas" without further locality. Synonymized by Causey, 1952.

Polydesmus hubrichti Chamberlin, 1943, Ent. News, 54: 15, figs. 1, 2. ♂ HT (USNM) from St. Louis, Missouri. Synonymized by Causey, 1952.

Polydesmus modocus Chamberlin, 1943, Proc. Biol. Soc. Washington, 56: 36, fig. 6. ♂ HT (?FMNH) from a site between Modoc and Roots, Randolph Co., Illinois. Synonymized by Causey, 1952.

Pseudopolydesmus pinetorum: Causey, 1952, Chicago Acad. Sci. Nat. Hist. Misc., 106: 6, fig. 5.

Range: Eastern parts of Texas, Oklahoma, and Kansas; Arkansas, Louisiana,Missouri, Illinois, Kentucky; presumably also Tennessee and Mississippi. A sample labeled Knox Co., Tennessee (VMNH) requires confirmation.

Pseudopolydesmus serratus (Say)

Polydesmus serratus Say, 1821, Journ. Acad. Nat. Sci. Philadelphia, 2: 106. Type material, no longer extant, from "the eastern shore of Virginia, under the bark of *Pinus variabilis*". Say is known to have collected on Assateague and Chincoteague islands, Accomack Co., Virginia, and material from either of these places should be obtained to provide a neotype.

?Polydesmus pensylvanicus Koch, 1847, in Krit. Rev. Insectenf. Deutschl., 3: 133; 1863, Die Myriapoden, 1: 59, pl. 69, fig. 142. Type material unknown, from "Pensylvanien" without further data.

Polydesmus scopus Chamberlin, 1942, Canadian Entom., 74: 16, fig. 1. ♂ HT (USNM) from "The Ledges", six miles south of Boone, Boone Co., Iowa. **New synonymy!**

Polydesmus planicolens Chamberlin, 1942, Canadian Entom., 74: 16, fig. 2. ♂ HT (USNM) from Ames, Story Co., Iowa. **New synonymy!**

Range: Widespread over eastern North America, from Quebec (Gaspé Peninsula), Michigan, and Minnesota southward to North Carolina, Tennessee, and Mississippi; apparently absent from the southeastern Coastal Plain and adjacent Piedmont.

Despite not having examined the relevant type material, I have been able to turn a single gonopod of a specimen of *P. serratus* into positions that gave such good approximations of the drawings for both *scopus* and *planicolens* that I have little doubt those names can be considered only a junior synonyms of *serratus*.

Genus **Scytonotus** C. L. Koch

Scytonotus Koch, 1847, Syst. Myriap., in: Panzer, Krit. Rev. Insectenf. Deutschl., 3: 57. Type species: *S. scabricollis* Koch, by subsequent designation of Bollman, 1893. – Cook & Cool, 1894, Ann. New York Acad. Sci., 8: 233. – Shelley, 1993, Brimleyana, 19: 12 (revision).

Lasiolathus Loomis, 1943, Journ. Washington Acad. Sci., 33: 318. Type species: *L. virginicus* Loomis, by original designation. Synonymized by Hoffman, 1947.

Nine species, in four disjunct geographic areas, one in northeastern, the others in northwestern North America.

Shelley (1994) recognizes three species groups, the membership of which is here organized alphabetically for consistency.

Removed from the genus: *Scytonotus nodulosus* Koch, 1847, see "Polydesmidae of Uncertain Status"

Scytonotus australis Hoffman

Scytonotus australis Hoffman, 1962, American Midl. Natur., 68: 245, fig. 1. ♂ HT (USNM) from ravine six miles west of Amicalola Falls, Dawson Co., Georgia. – Shelley, 1993, Brimleyana, 19: 47, figs. 27-28.

Range: Northern Georgia, North Carolina west of the French Broad River, adjacent parts of South Carolina and Tennessee (map, Shelley, 1993, fig. 30).

Scytonotus bergrothi Chamberlin

Scytonotus bergrothi Chamberlin, 1911, Canadian Entom., 43: 262, fig. 16. ♂ and ♀ ST (USNM), from Bremerton, Kitsap Co., Washington. – Shelley, 1994, Brimleyana, 19: 26, figs. 13-14.

Scytonotus pallidus Attems, 1931, Zoologica (Stuttgart), 30 (3-4): 145, figs. 234-39. ♂ HT (NMW) from Vancouver Island, British Columbia, Canada. Synonymized by Chamberlin & Hoffman, 1958.

Range: Southwesternmost British Columbia south through Washington to northwestern Oregon (map, Shelley, 1994, figs, 18, 19).

Scytonotus columbianus Chamberlin

Scytonotus columbianus Chamberlin, 1920, Canadian Entom., 52: 166, figs. 16, 17. ♂ HT (MCZ) from the "Columbia Valley", British Columbia. – Shelley, 1994, Brimleyana, 19: 21, figs. 7-8.

Range: Southeastern British Columbia and northeastern Washington (doubtless also occurs in northern Idaho) (map, Shelley, 1994, fig. 10).

Scytonotus granulatus (Say)

Polydesmus granulatus Say, 1821, Journ. Acad. Nat. Sci. Philadelphia, 2: 107. No type material known to exist. Type locality not specified, traditionally assumed to be vicinity of Philadelphia, Pennsylvania.

Scytonotus laevicollis C. L. Koch, 1847, Syst. Myriap., in Panzer: Krit. Rev. Insectenf. Deutschl., 3: 131; Die Myriapoden, 1863, 2: 41, pl. 80, fig. 163. No type material known to exist, original ♂ HT labeled only "Nordamerika." Synonymized by Bollman, 1893.

Scytonotus scabricollis C. L. Koch, 1847, Syst. Myriap., in: Panzer: Krit. Rev. Insectenf. Deutschl., 3: 130; Die Myriapoden, 2: 41, pl. 80, fig. 164. No type material known to exist; original two ♀ syntypes labeled only "Pensylvanien." Synonymized by Bollman, 1893.

Stenonia hispida: Sager, 1856, Proc. Acad. Nat. Sci. Philadelphia, 8: 109. Type material not known to exist, original type from Ann Arbor, Michigan. Synonymized with *nodulosus* by Bollman, 1893; with *granulatus* by Chamberlin & Hoffman, 1958.

Polydesmus setiger Wood, 1865, Trans. American Philos. Soc., 13: 213. Types (ANSP), from "Pennsylvania." Synonymized by Chamberlin & Hoffman, 1958.

Scytonotus cavernarum Bollman, 1887, Entom. Americana, 3: 46. ♂ HT (USNM) from Mayfield's Cave, Monroe Co., Indiana. Synonymized by Hoffman, 1962.

Scytonotus granulatus: Bollman, 1887, Entom. Americana, 3: 47. – Cook & Cook, 1894, Ann. New York Acad. Sci., 8: 233, pls. 6-9, figs. 1-41, 46-62, 64-71. – Hoffman, 1962, American Midl.

Natur., 67: 243, fig. 1. – Shelley, 1994, Brimleyana, 19: 38, figs. 21-22.

Range: Northeastern North America, from Quebec to South Carolina, west to Kansas, Nebraska, and Minnesota (map, Shelley, 1994, fig. 29).

Scytonotus inornatus Shelley

Scytonotus inornatus Shelley, 1994, Brimleyana, 19: 35, figs. 17-18. ♂ HT (FSCA) from Geary Ranch (not localized), Klamath Co., Oregon.

Range: Known only from type locality and Klamath Falls, southern Oregon (map, Shelley, 1994, fig. 20).

Scytonotus insulanus Attems

Scytonotus insulanus Attems, 1931, Zoologica (Stuttgart), 30(3-4): 147, figs. 240-245. ♂♀F ST (NMW) from Nanaimo, Vancouver Island, British Columbia. – Shelley, 1994, Brimleyana, 19: 23, figs. 11-12.

Range: Southeastern Alaska to central Oregon, with a disjunct population in extreme southeastern Washington (map, Shelley, 1994, figs. 19, 20).

Scytonotus piger Chamberlin

Scytonotus piger Chamberlin, 1910, Ann. Entom. Soc. America,3: 244, pl. 36, figs. 1-5. ♀ STs (USNM) from upper end of Mill Creek Canyon, Salt Lake Co., Utah. – Shelley, 1994, Brimleyana, 19: 15, figs. 2-6.

Scytonotus amandus Chamberlin, 1910, Ann. Entom. Soc. America, 3: 249, pl. 38, figs. 4-6, pl. 39, fig. 1. Location of type material unknown, from Mill Creek Canyon, Salt Lake Co., Utah. Synonymized by Shelley, 1994.

Scytonotus orthodox Chamberlin, 1925, Pan-Pacific Entom., 2: 61. ♂ HT (USNM) from Logan Canyon, Cache Co., Utah. Synonymized by Shelley, 1994.

Range: Two apparently disjunct areas: northern Idaho and adjacent parts of Montana and Washington; Wahsatch and Teton ranges in western Montana, southeastern Idaho, northern Utah (map, Shelley, 1994, figs. 9, 10).

Scytonotus simplex Chamberlin

Scytonotus simplex Chamberlin, 1941, Bull. Univ. Utah, 31(12): 16, fig. 30. ♂ HT (USNM) from Days Creek, Douglas Co., Oregon.– Shelley, 1994, Brimleyana, 19: 31, figs. 15-16.

Range: Coast ranges from Lincoln Co., Oregon, south to vicinity of San Francisco Bay, California (map, Shelley, 1994, fig. 20).

Scytonotus virginicus virginicus (Loomis)

Lasiolathus virginicus Loomis, 1943, Journ. Washington Acad. Sci., 33: 319, fig. 1. Imm. ♂ HT (MCZ) from Thornton Gap, Page-Rappahannock counties, Virginia.

Scytonotus virginicus: Hoffman, 1950, Virginia Journ. Sci., n.s. 1: 220, fig. 2; 1962, American Midl. Nat., 67: 247, fig. 5.

Scytonotus virginicus virginicus: Shelley, 1994, Brimleyana, 19: 44, figs. 23, 24.

Range: Blue Ridge physiographic province, Virginia, between the Potomac and Roanoke rivers (map, Shelley, 1994, fig. 30). Intergrades with the following in Grayson, Smyth, Wythe, and Patrick counties, Virginia.

Scytonotus virginicus michauxi Hoffman

Scytonotus michauxi Hoffman, 1962, American Midl. Nat., 67: 247, fig. 6. ♂ HT (USNM) from Roan Mountain, Carter Co., Tennessee.

Scytonotus virginicus michauxi: Shelley, 1994, Brimleyana, 19: 45, figs. 25-26.

Range: Southern Blue Ridge province in western North Carolina and adjacent Tennessee, from the Virginia state line to the Great Smoky Mountains (map, Shelley 1994, fig. 30).

Genus **Speodesmus** Loomis

Speodesmus Loomis, 1939, Bull. Mus. Comp. Zool., 86: 187. Type species: *S. echinourus* Loomis, by original designation.

Speorthus Chamberlin, 1952, Ent. News, 63: 12. Type species, *S. tuganbius* Chamberlin, by original designation. Synonymy implied by Loomis, 1960, formalized by Shear, 1974.

Four species, southwestern United States.

Speodesmus aquiliensis Shear

Speodesmus aquiliensis Shear, 1984, Myriapodologica, 1: 96, figs. 1-7. 0 HT (AMNH) from Fulford Cave, 21 miles southeast of Eagle, Eagle Co., Colorado.

Speodesmus bicornourus Causey

Speodesmus bicornourus Causey, 1959, Proc. Biol. Soc. Washington, 72: 71, figs. 4-6. 0 HT (AMNH) from Beck's Ranch Cave, six miles west of Round Rock, Williamson Co., Texas.

Speodesmus echinourus Loomis

Speodesmus echinourus Loomis, 1939, Bull. Mus. Comp. Zool., 86: 188, figs. 13a-g. 0 HT (MCZ) from Prassel Ranch Cave near Kerrville, Kerr Co., Texas.

Speodesmus tuganbius (Chamberlin)

Speorthus tuganbius Chamberlin, 1952, Ent. News, 63: 12. HT (USNM) from Carlsbad Caverns, Eddy Co., New Mexico. – Loomis, 1960, Journ. Kansas Entom. Soc., 33: 66, figs. 14-16 (gonopods illustrated from topotypic specimen).

Speodesmus tuganbius: Shear, 1974, Occ. Pap. California Acad. Sci., 112: 6, figs. 4-8.

Range: Caves in western Texas and eastern New Mexico.

Genus **Utadesmus** Chamberlin & Hoffman

Utadesmus Chamberlin & Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 71: 2. Type species: *Brachydesmus henriensis* Chamberlin, 1930, by original designation. – Shelley, 1996, Myriapodologica, 4: 10.

Two species: Northern New Mexico, southeast Utah (surely also in adjoining states).

Utadesmus henriensis (Chamberlin)

Brachydesmus henriensis Chamberlin, 1930, Pan-Pacific Entom., 6: 118, two unnumbered figures. ♂ HT (USNM) from Mount Ellen, Henry Mountains, Garfield Co., Utah.

Utadesmus henriensis Chamberlin & Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 71: 2. – Shelley, 1996, Myriapodologica, 4: 11, figs. 1-3.

Range: Known only from Garfield Co., Utah (map, Shelley, 1996, fig. 7).

Utadesmus hoffi Chamberlin & Hoffman

Utadesmus hoffi Chamberlin & Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 71: 3, figs. 1, 2. ♂ HT (USNM) from "Sandia Mountains" [probably at Albuquerque], Bernalillo Co., New Mexico. – Shelley, 1996, Myriapodologica, 4: 14, figs. 4-6.

Range: North-central New Mexico, in Cibola, Sandoval, Sante Fe, Bernalillo, and Torrance counties (map, Shelley, 1996, fig. 7).

POLYDESMIDAE OF UNCERTAIN STATUS OR IDENTITY

Scytonotus nodulosus C. L. Koch, 1847, Syst. der Myriap., in Panzer: Krit. Rev. Insectenf. Deutschl., 3: 131; 1863, Die Myriapoden, 2: 43, pl. 80, fig. 165.

Bollman (1893: 122, 151) retained this species in *Scytonotus* on the basis of a supposed feature of the pore location, but as noted as soon as the following year (Cook & Cook, 1894: 235), the published accounts of *nodulosus* - the habitus drawing as well as some textual comments - exclude it from *Scytonotus*. The 1863 illustration shows 20 (19+1) body segments, supported by the remark that the specimen is a male with 31 pairs of legs. The metaterga are shown to have three transverse rows of polygons, 2+2 large ones in the first row and a greater number of smaller in the 2nd and 3rd. Contrary to Bollman, Koch clearly stated that the paranota ("Seitenlappen") are modified laterally into a thickened peritreme ("Beule"), approximately as in species of the genus *Polydesmus*. In fact, it is difficult to imagine Koch's reasons for describing *nodulosus* in *Scytonotus*.

The type, part of the collection of the German entomologist Reich, was stated to have come from "Pensylvanien". With an adult length of 11 mm, it is much too small to represent any of the native species of *Pseudopolydesmus*, but does fall into the size range of the European species currently called *inconstans* Latzel. It is entirely probable that this species was introduced and established in eastern Pennsylvania well before the 1840s, and collected there before it was found in Europe.

Polydesmus moniliaris C. L. Koch, 1847, Syst. der Myriap., in Panzer: Krit. Rev. Insectenf. Deutschl., 3: 135; 1863, Die Myriapoden, 2: 20, pl. 69, fig. 143.

Essentially the same commentary made above is applicable here, except that the description was based on females. Chamberlin & Hoffman (1958: 75) have already posited the identity of this name as a senior synonym of *inconstans*. Like the preceeding, the animal is small enough to possibly the same as that currently called *Brachydesmus superus*, but Koch's drawings clearly show 19+1 body segments rather than 18+1.

Family Haplodesmidae Cook

Haplodesmidae Cook, 1895, Ann. New York Acad. Sci., 9: 4.

Haplosomidae Silvestri, 1895, Ann. Mus. Civ. Stor. Nat. Genova, 34: 638.

?Comodesmidae Cook, 1896, American Natur., 30: 415.

Haplodesmus Cook, 1895, proposed as a replacement for *Haplosoma* Verhoeff, 1894, is five months younger than *Haplosomum* Brolemann, 1895, which although an unjustified emendation of *Haplosoma*, is nonetheless valid because the latter name is preoccupied. Although Article 40 of the ICZN discusses the fate of family names based on type genera which are shown to be junior synonyms, it is not clear on this point in subparagraph (b) "Before 1961", whether Haplodesmidae should be replaced by a family name based on *Haplosomum*. I see no reason to invoke confusion by adopting such a change.

Two genera are represented in Middle America by introduced synanthropic species. A third, from Panama, is included with some reservations following its inclusion in Comodesmidae by Loomis, perhaps transfer to Fuhrmannodesmidae could be justified.

Genus **Cylindrodesmus** Pocock

Cylindrodesmus Pocock, 1889, Proc. Zool. Soc. London for 1888: 558. Type species: *C. hirsutus* Pocock, by monotypy. – Schubart, 1945, Arq. Mus. Nac. (Rio de Janeiro), 38: 132 (key to four species).

?*Lasiodesmus* Silvestri, 1908, Bull. American Mus. Nat. Hist., 24: 575. Type species: *L. caribicus* Silvestri, by original designation. Synonymized with *Inodesmus* [*nec sensu* Cook, 1896] by Loomis, 1934; with *Cylindrodesmus* by Hoffman, 1980.

Hypsoporus Loomis, 1969, Florida Entom., 52: 145. Type species: *Inodesmus globulosus* Loomis, 1964, by original designation. Synonymized by Enghoff, 1978 (not Hoffman, 1980!)..

Three (or four) nominal species, two of them widely dispersed in the tropics through commerce.

Resolution of the membership of this genus can hardly be achieved until the characters of its type species have been established. It is by no means assurred that Attems' (1900) material from the Seychelles, on which our concept of *hirsutus* is based, is conspecific with that of Pocock from Christmas Island. A second and likewise widespread species, *C. laniger* (Schubart, 1945) is said to differ from *hirsutus* primarily in its smaller size, which casts doubt on identifications published prior to 1945 if in fact two species are involved.

Until such time as specimens - rather than literature accounts - are compared, I grant *laniger* the "benefit of doubt" rather than unjustly synonymize a valid form, and treat *hirsutus* as through Attems' identification was correct..

Cylindrodesmus hirsutus Pocock

Cylindrodesmus hirsutus Pocock, 1889, Proc. Zool. Soc. London for 1888: 558. Type material (?BMNH) from Christmas Island (105.40 E, 10.30 S), Indian Ocean.

The only Neotropical records known to me appear to be those mentioned by Shear & Peck (1987) on the premise that *Lasiodesmus cariabicus* is a junior synonym. Although entirely possible, this association remains to be confirmed, and in any case, some of these records may refer to the following species (**if** that is maintained as a valid species).

Cylindrodesmus laniger Schubart

Cylindrodesmus laniger Schubart, 1945, Arq. Mus. Nac. (Rio de Janeiro), 38: 130. ♂ HT (Mus. Zool. Sao Paulo), from Tijuca, Distrito Federal, Brasil.

Cylndrodesmus palmyrae Chamberlin, 1954, Ent. News, 65: 66, fig. 1. ♂ HT (USNM) from Palmyra Island, Line Islands, Polynesia. Synonymized by Enghoff, 1978.

Inodesmus globulosus Loomis, 1964, Fieldiana: Zool., 47: 30. ♀ HT (FMNH) from Las Cumbres, Prov. Panama, Panama. Synonymized by Enghoff, 1978.

Hypsoporus globulosus Loomis, 1969, Florida Entom., 52: 145, fig. 8.

Range: Virtually pantropical, most records appear to be in the Neotropical Region, only the Panama locality for "*I. globulosus*" and a record for Guadeloupe (Mauriès, 1980) are confirmed for our area.

Genus **Hypsiloporus** Loomis

Hypsiloporus Loomis, 1961, Proc. U. S. Nat. Mus., 113: 104. Type species: *H. proclivis* Loomis, by original designation; 1964, Fieldiana Zool., 47: 27 (key to four species).

Four species, Panama.

This genus is retained in Haplodesmidae in deference to Loomis's original placement; perhaps it should be transferred to Fuhrmannodesmidae as a possibly close relative of *Eutynellus*.

Hypsiloporus erosus Loomis

Hypsiloporus erosus Loomis, 1964, Fieldiana Zool., 47: 27, fig. 13, O. ♂ HT (FMNH) from El Valle, Prov. Cocle, Panama.

Hypsiloporus montanus Loomis

Hypsioloporus montanus Loomis, 1964, Fieldiana Zool., 47: 28, fig. 2, L. ♂ HT (FMNH) from Finca Lerida, near Boquete, Prov. Chiriquí, Panama.

Hysiloporus proclivis Loomis

Hypsiloporus proclivis Loomis, 1961, Proc. U. S. Nat. Mus., 113: 105, figs. 5f-g, 6a. ♀ HT (USNM) from Barro Colorado Island, Canal Zone, Panama.

Hypsiloporus serratus Loomis

Hypsiloporus serratus Loomis, 1964, Fieldiana Zool., 47: 29, figs.2,M, 13,P. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panama.

Genus **Prosopodesmus** Silvestri

Prosopodesmus Silvestri, 1910, Zool. Anz., 35: 360. Type species: *P. jacobsoni* Silvestri, by original designation.

Homodesmus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 223. Type species: *H. parvus* Chamberlin, by original designation. Synonymized by Loomis, 1950.

Two species, one essentially pantropical through synanthropy.

Prosopodesmus jacobsoni Silvestri

Prosopodesmus jacobsoni Silvestri, 1910, Zool. Anz., 35: 362, figs. 6, 7. ♂♀ ST (LEAP) from Batavia (Djakarta), Java.

Homodesmus parvus Chamberlin, 1918, Bull. Mus. Comp. Zool. 62: 223. ♂ HT (MCZ) from Manneville, Haiti. Synonymized by Loomis, 1950.

Prosopodesmus jacobsoni hilaris Brolemann, 1920, Voy. Alluaud & Jeannel en Afr. Or., Diplopoda, p. 226, text figs. LXXXI-LXXXII, pl. figs. 134-144. ♂ HT (MHNP) from Grotte de Mangapwani, Zanzibar Island, Tanzania.

Range: Widespread in the tropics through human introductions: Java, New Caledonia; southern India; Zanzibar; southern Florida; Haiti, Puerto Rico, Jamaica, St. Eustatius; Panama; Brazil, Ecuador (Galapagos Islands). Original range unknown.

It seems unlikely that a local population in Tanzania is sufficiently different from the remainder of the species to warrant subspecific designation.

Family Cryptodesmidae Karsch

Cryptodesmoidae Karsch, 1880, Mitt. Munchner ent. Ver., 4: 143.

Cryptodesmidae Silvestri, 1894, Ann. Mus. Civ. Stor. Nat. Genova, 34: 647.– Hoffman, 1973, Stud. Neotrop. Fauna, 8: 179 (classification).

Peridontodesmidae Pocock, 1909, Biol. Centrr.-Amer., Diplop., p. 134.

Hexodontiinae Verhoeff, 1941, Jenaische Zeitschr. Naturw., 73: 248.

About 36 genera worldwide, dispersed through four provisional subfamilies. As only the nominate group is represented in the Neotropical region, a subfamily heading is unnecessary.

The diversification of peridontodesmids in southern Mexico, and their poverty or absence in the lower Mesamerican isthmus, casts doubts on their affinity with South American cryptodesmids.

Genus **Diaphanacme** Loomis

Diaphanacme Loomis, 1964, Fieldiana: Zool., 47: 31. Type species: *D. latus* Loomis, by original designation.

One species, Panama.

Diaphanacme lata Loomis

Diaphanacme latus Loomis, 1964, Fieldiana: Zool., 47:32, figs. 2, O-R. ♂ HT (FMNH) from El Valle, Prov. Cocle, Panama.

Genus **Maderesmus** Chamberlin

Maderesmus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 61. Type species: *M. tepoztlanus* Chamberlin, by original designation.

Two species, Mexico (Michoacan, Morelos).

Maderesmus hoogstraali (Chamberlin)

Peridontodesmus hoogstraali Chamberlin, 1942, Proc. Biol. Soc. Washington, 55: 58, fig. 6. ♂ HT (USNM) from Cerro Tancítaro, Michoacan, Mexico.

Maderesmus hoogstraali Chamberlin, 1943, Bull. Univ. Utah, 34(7): 61.

Maderesmus tepoztlanus Chamberlin

Maderesmus tepoztlanus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 61, fig. 148. ♂ HT (USNM) from Tepoztlán, Morelos, Mexico.

Genus **Peridontodesmus** Silvestri

Peridontodesmus Silvestri, 1896, Ann. Mus. civ. Stor. nat. Genova, 36: 197. Type species: *Polydesmus woodianus* Humbert & DeSaussure, 1869, by original designation.

Hexodontia Verhoeff, 1932, Zool. Jahrb. Abt. Syst. 62: 516. Type species: *H. cordobana* Verhoeff, by monotypy. Synonymized by Hoffman, 1980.

Trachyphloeus Attems, 1933, Ann. Naturh. Mus. Wien, 46: 264. Type species: *Peridontodesmus electus* Chamberlin, 1914, by original designation. Preoccupied by *Trachyphloeus* Germar, 1817.

Rhexiphloeus Attems, 1940, Das Tierreich, 70: 460. Replacement name for *Trachyphloeus* Attems, 1933, type species: *Peridontodesmus electus* Chamberlin, 1914, by direct substitution. Synomized with *Hexodontia* by Hoffman, 1950, with *Peridontodesmus* by Hoffman, 1973

Kalesmus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 60. Type species: *K. phanus* Chamberlin, by original designation. **New synonymy!** Implied by Shear, 1986, here formalized.

Apomus (Parapomus) Kraus, 1954, Senckenbergiana biol., 35: 317. Type species: *A. (P.) zilchi* Kraus, by original designation. Synonymized by Loomis, 1968.

Thelura Loomis, 1966, Ann. Entom. Soc. America, 59: 12. Type species: *T. punctata* Loomis, by original designation. Synonymized by Shear, 1986.

Ten species, Mexico to Costa Rica. Some of the following names, based on female specimens, may be referable to other genera.

Peridontodesmus cordobanus (Verhoeff)

Hexodontia cordobana Verhoeff, 1932, Zool. Jahrb. Abt. Syst. 62: 518, figs. 45-47. ♂ HT (ZSBS) from Cordoba, Veracruz, Mexico.

Peridontodesmus cordobanus: Hoffman, 1980, Classification of the Diplopoda, p. 147. New combination resulting from synonymy of *Hexodontia.*

Peridontodesmus electus Chamberlin

Peridontodesmus electus Chamberlin, 1914, Trans. American Entom. Soc., 40: 188, fig. 3. ♂ HT (MCZ?) from Laguna, Juan Viñas, Prov. Cartago, Costa Rica.

Rhexiphloeus electus Attems, 1940, Das Tierreich, 70: 461, figs. 654-656.

Peridontodesmus eutropis (Chamberlin), new combination!

Kalesmus eutropis Chamberlin, 1943, Bull. Univ. Utah, 34(7): 60, fig. 153. ♂ HT (USNM) from Fortin de los Flores, Veracruz, Mexico.

Peridontodesmus flagellatus Pocock

Peridontodesmus flagellatus Pocock, 1909, Biol. Centr.-Amer., Diplop. p. 136, pl. 10, figs. 4a-g. HT (?BMNH) from Cholhuitz (Departamento not located), Guatemala.

Peridontodesmus hirsutus Pocock

Peridontodesmus hirsutus Pocock, 1909, Biol. Centr.-Amer., Diplop., p. 136, pl. 10, figs. 5, 5a. HT (?BMNH) from Teapa, Tabasco, Mexico.

Peridontodesmus medius Chamberlin

Peridontodesmus medius Chamberlin, 1943, Bull. Univ. Utah, 34(7): 59, figs. 138, 139. ♀ HT (USNM) from Ixtapan del Oro, Mexico, Mexico.

Peridontodesmus morelus Chamberlin

Peridontodesmus morelus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 59, figs. 140-143. ♂ HT (USNM) from Chapultepec, near Cuernavaca, Morelos, Mexico.

Peridontodesmus parvus Chamberlin

Peridontodesmus parvus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 59, fig. 144. ♀ HT (USNM) from Villa Juarez, Puebla, Mexico.

Peridontodesmus phanus (Chamberlin), new combination!

Kalesmus phanus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 60, figs. 150-152. ♂ HT (USNM) from Parque Nacional de Zempoala, Morelos, Mexico.

Peridontodesmus punctatus (Loomis)

Thelura punctata Loomis, 1966, Ann. Entom. Soc. America, 59: 12, figs. 4-6. ♂ HT (SMUK) from El Salto, San Luis Potosí, Mexico.

Peridontodesmus punctatus: Shear, 1986, Speleol. Monogr. Texas Tech. Univ. 1: 79.

Peridontodesmus zilchi (Kraus)

Apomus (Parapomus) zilchi Kraus, 1954, Senckenbergiana biol., 35: 317, figs. 41, 42. ♂ HT (SMF) from Volcán Los Naranjos, Dept. Santa Ana, El Salvador.

Hexodontia zilchi: Loomis, 1968, Bull. U. S. Nat. Mus., 266: 30.

Range: Recorded from several departments in El Salvador (Kraus, 1954).

Genus **Pinesmus** Chamberlin

Pinesmus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 62. Type species: *P. setosus* Chamberlin, by original designation.

Monobasic, Mexico.

Pinesmus setosus Chamberlin

Pinesmus setosus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 62, fig. 149. ♂ HT (USNM) from Desierto de los Leones, Distrito Federal, Mexico.

Genus **Sierresmus** Chamberlin

Sierresmus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 60. Type species: *S. hidalgonus* Chamberlin, by original designation.

Monobasic, Mexico.

Sierresmus hidalgonus Chamberlin

Sierresmus hidalgonus Chamberlin,, 1943, Bull. Univ. Utah, 34(7): 61, figs. 145, 146. ♂ HT (USNM) from Chapulhuacan, Hidalgo, Mexico.

Family Macrosternodesmidae Brolemann

Macrosternodesmini Brolemann, 1916, Ann. Soc. Ent. France, 84:585.

Macrosternodesmidae Hoffman, 1980, Classification of the Diplopoda, p. 177.

Three genera, Europe; ?one, North America.

My inclusion (1980) of *Chaetaspis* in this group was based largely on similarity of the gonopods with those of *Macrosternodesmus palicola* Brolemann.

Genus **Chaetaspis** Bollman

Chaetaspis Bollman, 1887, Entom. Americana, 3: 45. Type species: *C. albus* Bollman, by monotypy.

Antriadesmus Loomis, 1943, Bull. Mus. Comp. Zool., 92: 408. Type species: *A. fragilis* Loomis, by original designation. Synonymized by Hoffman, 1980.

Five species, not all congeneric, have been placed in this genus; eastern United States.

Chaetaspis albus Bollman

Chaetaspis albus Bollman, 1887, Entom. Americana, 3: 45. Location of type material unknown, from Bloomington, Monroe Co., Indiana.

Range: Central eastern United States, from southern Indiana and southwestern Virginia to northern Alabama and Mississippi (from unpublished studies).

Chaetaspis debilis (Causey), new combination!

Antriadesmus debilis Causey, 1959, Journ. Tennessee Acad. Sci. 34: 231, fig. 2. ♂ HT (AMNH) from Walker Spring Cave, Wayne Co., Tennessee.

Placement of this species only follows the generic synonymy; *debilis* in fact is not congeneric with *albus*.

Chaetaspis fragilis (Loomis)

Antriadesmus fragilis Loomis, 1943, Bull. Mus. Comp. Zool., 92: 109, figs. 18a-b. ♂ HT (MCZ) from White's Cave, Edmondson Co., Kentucky. – Loomis, 1960, Journ. Kansas Entom. Soc., 33: 68, fig. 17.

Range: This species, congeneric with *albus*, seems restricted to the vicinity of Mammoth Cave, Kentucky.

Chaetaspis mollis (Causey)

Antriadesmus mollis Causey, 1959, Journ. Tennessee Acad. Sci., 34: 230, fig. 1. ♂ HT (AMNH) from Cumberland Caverns, Warren Co., Tennessee.

Placement of this species only follows the generic synonymy; *mollis* in fact is not congeneric with *albus*.

Chaetaspis ohionis Causey

Chaetaspis albus [nec Bollman, 1887] Williams & Hefner, 1928, Bull. Ohio Biol. Surv., 18: 110, fig. 12a.

Chaetaspis ohionis Causey, 1950, Ent. News, 61: 197. Location of type material unknown, from localities in Athens and Washington cos., Ohio.

This species, never collected subsequent to its description, is not congeneric with *albus*, in fact possibly not even referable to this family. Examination of topotypic material remains a desideratum of the highest priority.

Genus **Ophiodesmus** Cook

Ophiodesmus Cook, 1895, Ann. New York Acad. Sci., 9: 5. Type species: *Strongylosoma verhoeffi* Brolemann, 1895, by original designation.

Two species, western Europe, one introduced into North America.

Ophiodesmus albonanus (Latzel)

Paradesmus albonanus Latzel, 1895, Mitt. Naturh. Mus. Hamburg, 12: 107, fig. 1. Type material (ZMH) from Hamburg, Germany.

Ophiodesmus albonanus: Schubart, 1934, Tierwelt Deutschlands, 28: 170, figs. 273-275. – Palmén, 1952, Ann. Zool. Soc. "Vanamo", 15(1): 14.

Range: Northern Europe (England, France, Netherlands, Germany, Sweden), recorded from St. John's, Newfoundland, by Palmén (1952); it is not known if the population still exists there.

Family Nearctodesmidae Chamberlin & Hoffman

Nearctodesmidae Chamberlin & Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc., 71: 1. – Shelley, 1994, Canadian Journ. Zool., 72: 470-495 (revision).

Five genera, northwestern North America; Illinois, central western Mexico (map, Shelley, 1994, fig. 1).

The content and affinities of this taxon are far from being settled. Already in 1980 I noted some similarities with various arcane polydesmoid genera from southwestern United States as well as with the Palearctic group Macrosternodesmidae. These points have been confirmed and elaborated by both Shelley (1994) and Simonsen (1990), the latter even suggesting union of nearctodesmids with macrosternodesmids as coordinate subfamilies. While this may indeed be the correct disposition, I concur with Dr. Shelley that no major changes be implemented until the "micro-nearctodesmid" fauna of the Sonoran region is much better investigated.

Genus **Bistolodesmus** Shelley

Bistolodesmus Shelley, 1994, Canadian Journ. Zool., 72: 485. Type species: *Polydesmus bonikus* Chamberlin, 1912, by original designation.

Monobasic; Washington (state).

Bistolodesmus bonikus (Chamberlin)

Polydesmus bonikus Chamberlin, 1912, Ann. Entom. Soc. America, 5: 168, pl. 10, fig. 3. Type material lost, from "Madison, Washington", considered by Shelley (1994: 486) to be a misspelling of Madson, Whitman Co., Washington.

Bistolodesmus bonikus: Shelley, 1994, Canadian Journ. Zool., 72: 485, figs. 27-30, 38, 42. Designation of ♂ NT (USNM) from Cleveland Gulch, northeast of Harvard, Latah Co., Idaho.

Range: Northern Idaho, eastern Washington (map, Shelley, 1994, fig. 52).

Genus **Ergodesmus** Chamberlin

Ergodesmus Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 94. Type species: *E. compactus* Chamberlin, by original designation. – Shelley, 1994, Canadian Journ. Zool., 92: 487.

Ectopodesmus Hoffman, 1962, American Midl. Natur., 68: 194. Type species: *E. remingtoni* Hoffman, by original designation. Synonymized by Hoffman, 1980.

Two species, northwestern North America; Illinois.

Ergodesmus compactus Chamberlin

Ergodesmus compactus Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 94, fig. 1. ♂ HT (USNM) from "Between Goldendale and Mayfield, Klickitat Co., Washington", the second locality being suspected by Shelley (1994: 487) of being an error for *Maryhill.* – Shelley, 1994, Canadian Journ. Zool., 92: 487, figs. 31-34, 39, 43.

Ectopodesmus cristatus Loomis & Schmitt, 1971, Northwest Science, 45: 115, figs. 3-6. ♂ HT (USNM) from the junction of Clark Fork River and Deep Creek, Missoula Co., Montana. Synonymized by Shelley, 1994.

[*Ectopodesmus cristatus* variety *dentatus* Loomis & Schmitt, 1971, Northwest Science, 45: 115. ♂ HT (USNM) from a site three miles north of Thompson Falls, Sanders Co., Montana. Synonymized by Shelley, 1994, but the name has no standing in zoological nomenclature (cf. ICZN Art. 16)].

Range: Western Montana, northern Idaho, adjoining parts of Washington and British Columbia (map, Shelley, 1994, figs. 52, 54).

Ergodesmus remingtoni (Hoffman)

Ectopodesmus remingtoni Hoffman, 1962, American Midl. Nat., 68: 194, figs. 1-6. ♂ HT (USNM) from a cave 1.7 miles north of Grafton, Jersey Co., Illinois.

Ergodesmus remingtoni: Shelley, 1994, Canadian Journ. Zool., 92: 490, fig. 35.

Range: Known so far from a number of caves in western Illinois, and another in extreme southeastern Illinois. The species may actually be a facultative troglophile, occuring also in edaphic habitats that are adequately cool and moist.

Genus **Kepolydesmus** Chamberlin

Kepolydesmus Chamberlin, 1910, Ann. Entom. Soc. America, 3: 246 (as subgenus of *Polydesmus).* Type species: *P. (K.) anderisus* Chamberlin, by subsequent designation of Chamberlin, 1949. – Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 94. – Shelley, 1994, Canadian Journ. Zool., 92: 484.

One species, northwestern United States.

Kepolydesmus anderisus (Chamberlin)

Polydesmus (Kepolydesmus) anderisus Chamberlin, 1910, Ann. Entom. Soc. America, 3: 246, pl. 36, figs. 6-9, pl. 37, figs. 1-4. ♂ HT (USNM) from Kendrick, Latah Co., Idaho.

Kepolydesmus anderisus: 1949, Journ. Washington Acad. Sci., 39: 94, fig. 2. – Shelley, 1994, Canadian Journ. Zool., 92: 484, figs. 23-26, 37, 41.

Kepolydesmus mimus Chamberlin, 1947, Proc. Biol. Soc. Washington, 60: 10, fig. 3. ♂ HT (USNM) from Martha Creek, Skamania Co., Washington. Synonymized by Shelley, 1994.

Kepolydesmus hesperus Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 94, fig. 3. ♂ HT (USNM) from Ashland, Jackson Co., Oregon. Synonymized by Shelley, 1994.

Kepolydesmus pungo Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 95, fig. 4. ♂ HT (USNM) from Horsetail Falls, Multnomah Co., Oregon. Synonymized by Shelley, 1994. [The enigmatic specific name assumes relevance on being recognized as the Gosiute indian word meaning "horse"].

Range: Apparently dispersed into three disjunct areas: one in southwest Oregon, a second in south central Washington, and the main area centered on northern Idaho and adjacent parts of Montana, Oregon, and Washington (map, Shelley, 1994, fig. 54).

Genus **Nearctodesmus** Silvestri

Nearctodesmus Silvestri, 1910, Zool. Anz., 35: 364. Type species: *Polydesmus (Stenonia) cerasinus* Wood, 1864, by original designation. – Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 96. – Shelley, 1994, Canadian Journ. Zool., 92: 479 (revision).

Three species, Pacific Coast region from British Columbia to San Francisco Bay.

Article 70(a) of the ICZN states that if an established species is designated by an author as type species of a new nominal genus, it is to be assumed that the author has identified the species correctly. Although Silvestri specified *Polydesmus cerasinus* Wood as the type of *Nearctodesmus*, the somewhat ambiguous gonopod drawing that he provided, under that species name, is distinctly more similar to the gonopods of the species identified by Shelley as *N. insulanus* Chamberlin. Perhaps for this reason, Shelley cited Silvestri's usage under both of those species' names. I believe that no useful end would be served by invoking the provisions of Article 70(b) to refer the case to the Commission for judgement.

Nearctodesmus cerasinus (Wood)

Polydesmus (Stenonia) cerasinus Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia , 16: 6. Type material lost, from an unspecified place in Oregon. Shelley (1994) designated a ♂ NT (USNM) from Pistol River, Curry Co., Oregon

Nearctodesmus cerasinus: Silvestri, 1910, Zool. Anz., 35: 364, fig. 10. – Shelley, 1994, Canadian Journ. Zool., 92: 482, figs. 15-18.

Nearctodesmus brunnior Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 96, fig. 6. ♂ HT (USNM) from nine miles north of Crescent, Del Norte Co., California. Synonymized by Shelley, 1994.

Nearctodesmus campicolens Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 96, fig. 7. ♂ HT (USNM) from "Redwood Fort, Route 101, Prairie Creek Park", California. Synonymized by Shelley, 1994, who cited the type locality - presumably from a vial label - as "Redwood National Park, Prairie Creek area, Humboldt Co., California".

Nearctodesmus malkini Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc., 87: 1, figs. 1-3. ♂ HT (USNM) from Brookings, Curry Co., Oregon. Synonymized by Shelley, 1994.

Range: Coastal region from Douglas Co., Oregon, south to Humboldt Co., California, with an apparently disjunct more southern population in Mendocino Co., California (map, Shelley, 1994, fig. 54).

Nearctodesmus insulanus Chamberlin

Kepolydesmus insulanus Chamberlin, 1941, Bull. Univ. Utah, 31(11): 25, fig. 47. ♂ HT (USNM) from Vancouver Island, British Columbia.

Nearctodesmus insulanus: Chamberlin & Hoffman, 1958, Bull. U. S. Nat. Mus., 212: 62. – Shelley, 1994, Canadian Journ. Zool., 92: 479, figs. 9-14, 36, 40.

Nearctodesmus amissus Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 96, fig. 5. ♂ HT (USNM) from "Oregon" without further locality. Synonymized by Shelley, 1994.

Nearctodesmus pseustes Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 96, fig. 8. ♂ HT (USNM) from Boyer, Tillamook Co., Oregon. Synonymized by Shelley, 1994.

Nearctodesmus renigens Chamberlin, 1949, Journ. Washington Acad. Sci., 39: 97, fig. 9. ♂ HT (USNM) from "Oregon, probably near Corvallis." Synonymized by Shelley, 1994.

Nearctodesmus carli Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc., 87: 2, figs. 4, 5. ♂ HT (Location ?) from Scott Island, British Columbia. Synonymized by Shelley, 1994.

Nearctodesmus boydi Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc., 87: 2, figs. 6, 7. ♂ HT (USNM) from Lake Cowichan, Vancouver Island, British Columbia. Synonymized by Shelley, 1994.

Nearctodesmus cochlearius Causey, 1954, Ann. Entom. Soc. America, 47: 82, figs. 4-6. ♂ HT (AMNH) from Seattle, King Co., Washington. Synonymized by Shelley, 1994.

Nearctodesmus olympus Causey, 1954, Ann. Entom. Soc. America, 47: 84, figs. 7, 8. ♂ HT (AMNH) from Olympic Hot Springs, Clallam Co., Washington. Synonymized by Shelley, 1994.

Range: Coastal regions of British Columbia, Washington, and Oregon; a disjunct population in southeastern British Columbia (map, Shelley, 1994, fig. 54).

Genus **Sakophallus** Chamberlin

Sakophallus Chamberlin, 1942, Proc. Biol. Soc. Washington, 55: 59. Type species: *S. simplex* Chamberlin, by original designation.

Jaliscodesmus Hoffman, 1975, Rev. suisse Zool., 82: 648. Type species: *J. alticola* Hoffman, by original designation. Synonymized by Shelley, 1994.

One species, central western Mexico.

Shelley (1994: 492) has correctly pointed out the disjunct position of this genus in the Nearctodesmidae.

Sakophallus simplex Chamberlin

Sakophallus simplex Chamberlin, 1942, Proc. Biol. Soc. Washington, 55: 59, figs. 8-10. ♂ HT (formerly USNM, lost or misplaced) from Cerro Tancitaro, 7,800 ft., Michoacan, Mexico.

Jaliscodesmus alticola Hoffman, 1975, Rev suisse Zool., 75: 649, figs. 1-5. ♂ HT (MHNG) from east slope of Volcán de Colima near tree line, Jalisco, Mexico. Synonymized by Shelley, 1994.

Family Fuhrmannodesmidae Brolemann

Fuhrmannodesmini Brolemann, 1916, Ann. Soc. ent. France, 84: 586.

Fuhrmannodesmidae Hoffman, 1980, Classification of the Diplopoda, p. 177.

Eutynellidae Chamberlin, 1940, Bull. Univ. Utah, 30(9): 30.

Trichopolydesmidae Loomis, 1964, Fieldiana: Zool., 47: 79 (key to nine genera occuring in Panama).

About 55 very nominal genera, most of them monobasic;

In 1980, I referred to this taxon as a "...gigantic residue of tropical species previously placed in the Polydesmidae, Vanhoeffenidae, Trichopolydesmidae, or no family at all. Aside from being small to tiny, pallid or colorless, and somewhat polydesmid in form, these creatures are extremely diverse in gonopod pattern and should unquestionably be sorted out into at least two or three families." In the two decades since those words were written, a number of new species and genera have been described under this rather shaky family name, but virtually no progress has been made toward a revision.

Accepting the precedent of my 1980 concept of a superfamily Trichopolydesmoidea (almost certainly an *ignis fatuus*), Simonsen (1990) very briefly treated the Trichopolydesmidae and Fuhrmannodesmidae as distinct families, whilst combining the Nearctodesmidae and Macrosternodesmidae under the latter name.In revising the Nearctodesmidae, Shelley (1994) noted the disjunct status of *Sakophallus* and commented that several genera of small polydesmoids from southwestern United States (which he denominated "micro-nearctodesmids") required clarification as possible members of a nearctodesmid-macrosternodesmid spectrum. In my view, these same genera (e.g., *Harpagonopus, Oodedesmus, Phreatodesmus, Tidesmus)* equally suggest an interface with "fuhrmannodesmids", through *Tylogoneus*, for instance.

The following list of taxa must be taken for what it is - a heterogeneous aggregation of tiny polydesmids pragmatically combined into an illusory, polyphyletic taxon for want of a better alternative. Critics are earnestly invited to replace this *collage* with a real classification.

Genus **Agenodesmus** Loomis

Agenodesmus Loomis, 1934, Smithsonian Misc. Coll., 89(14): 38. Type species: *A. reticulatus* Loomis, by original designation. – Shear & Peck, 1987, Canadian Journ. Zool., 65: 2641.

Two species: Caribbean region; Galapagos Islands.

Agenodesmus reticulatus Loomis

Agenodesmus reticulatus Loomis, 1934, Smithsonian Misc. Coll., 89(14): 40, fig. 20. ♂ HT (USNM) from Fond des Negre, Haiti.

Range: Haiti, St. Kitts, St. Luciaa, Dominica, Grenada, clearly an anthropochoric distribution.

Genus **Caramba** Shear

Caramba Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult. 171(3): 246. Type species: *C. delburro* Shear, by original designation.

Three species, central eastern Mexico, in caves.

Caramba delburro Shear

Caramba delburro Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(3): 248, figs. 24-28. ♂ HT (AMNH) from Cueva del Burro, Rio Escondido, Lago de Malpaso, Ocozocuatla, Chiapas, Mexico.

Caramba enbecausius Shear

Caramba enbecausius Shear, 1982, Bull. Assoc. Mexican Cave Stud., 8: 157, figs. 47-49. ♂ HT (AMNH) from Cueva de Las Miravillas, six miles south of Acatlán, Oaxaca, Mexico.

Caramba grandeza Shear

Caramba grandeza Shear, 1977, Acc. Naz. Lincei. Prob. Att. Sci. Cult. 171(3)): 250, fig. 29. ♂ HT (AMNH) from Grutas de Llano Grande, Llano Grande, Huixtla, Chiapas, Mexico.

Genus **Chilaphrodesmus** Loomis

Chilaphrodesmus Loomis, 1934, Smithsonian Misc. Coll. 89(14): 43. Type species: *C. rubellus* Loomis, by original designation. Synonymized with *Cryptogonodesmus* Silvestri, 1898, by Loomis, 1941.

Two species, Hispaniola; two, Puerto Rico..

Loomis's combination of this genus with *Cryptogonodesmus* was made without knowledge of the gonopod structure in *C. clavidives,* the Venezuelan type species.

Chilaphrodesmus clarus (Chamberlin), new combination!

Cryptogonodesmus clarus Chamberlin, 1950, Proc. Biol. Soc. Washington, 63: 148. ♀ HT (USNM) from Toro Negro, Villalba, Puerto Rico.

Chilaphrodesmus darlingtoni (Loomis), new combination!

Cryptogonodesmus darlingtoni Loomis, 1941, Bull. Mus. Comp. Zool. 88: 65, figs. 25a-b. ♂ HT (MCZ) from Loma Vieja, south of Constanza in the Cordillera Central, Republica Dominicana.

Chilaphrodesmus rollei (Velez), new combination!

Cryptogonodesmus rollei Velez, 1967, Caribbean Journ. Sci., 7: 31, figs. 13-15. ♂ HT (USNM) from La Mina, El Yunque, Puerto Rico.

Chilaphrodesmus rubellus Loomis

Chilaphrodesmus rubellus Loomis, 1934, Smithsonian Misc. Coll. 89(14): 43, text figs 21a, b; pl. 2, fig. 6. ♂ HT (USNM) from Morne Pilboreau, above Ennery, Haiti.

Genus **Chirripeckia** Hoffman

Chirripeckia Hoffman, 1976, Rev. suisse Zool., 83: 744. Type species: *C. lyncilecta* Hoffman, by original designation.

One species, Guatemala.

Chirripeckia lyncilecta Hoffman

Chirripeckia lyncilecta Hoffman, 1976, Rev suisse Zool., 83: 744, figs. 1-3. ♂ HT (MHNG) from Cueva Chirripeck, south of Coban, Dept. Alta Verapaz, Guatemala.

Genus **Cylindrogonus** Loomis

Cylindrogonus Loomis, 1964, Fieldiana: Zool., 47: 83. Type species: *C. copiosus* Loomis, by original designation.

Two species, Panama and Costa Rica..

Cylindrogonus copiosus Loomis

Cylindrogonus copiosus Loomis, 1964, Fieldiana: Zool., 47: 84, figs. 8, A-F. ♂ HT (FMNH) from "Casita Alta", Finca Lerida, near Boquete, Prov. Chiriquí, Panama.

Cylindrogonus tumidus Loomis

Cylindrogonus tumidus Loomis, 1974, Florida Entom., 57: 182, figs. 20-22. ♂ HT (FSCA) from north side of Cerro de la Muerte on the Interamerican Highway, Prov. ?Cartago, Costa Rica.

Genus **Cyclopsodesmus** Loomis

Cyclopsodesmus Loomis, 1964, Fieldiana: Zool., 47: 80. Type species: *C. scaurus* Loomis, by original designation.

Three species, Panama.

Cyclopsodesmus geniculatus Loomis

Cyclopsodesmus geniculatus Loomis, 1964, Fieldiana: Zool., 47: 82, figs. 7, M-P. ♂ HT (FMNH) from Cerro Punta, Prov. Chiriquí, Panama.

Cyclopsodesmus octosetosus Loomis

Cyclopsodesmus octosetosus Loomis, 1964, Fieldiana: Zool., 47: 83, figs. 7, Q-S. ♂ HT (FMNH) from Cerro Punta, Prov. Chiriquí, Panama.

Cyclopsodesmus scaurus Loomis

Cyclopsodesmus scaurus Loomis, 1964, Fieldiana: Zool., 47: 81, figs. 7, G-L. ♂ HT (FMNH) from Finca Lerida near Boquete, Prov. Chiriquí, Panama.

Genus **Enantiogonus** Loomis

Enantiogonus Loomis, 1961, Proc. U. S. Nat. Mus., 113: 103. Type species: *E. fragilis* Loomis, by original designation.

One species, Panama.

Enantiogonus fragilis Loomis

Enantiogonus fragilis Loomis, 1961, Proc. U. S. Nat. Mus. 113: 104, figs. 5b-e. ♂ HT (USNM) from Piña area, Canal Zone, Panama.

Genus **Eutynellus** Chamberlin

Eutynellus Chamberlin, 1940, Bull. Univ. Utah, 30(9): 9. Type species: *E. flavior* Chamberlin, by original designation.

One species, Panama.

Eutynellus flavior Chamberlin

Eutynellus flavior Chamberlin, 1940, Bull. Univ. Utah, 30(9): 9. HT (USNM) from Barro Colorado Island, Canal Zone, Panama.

The failure of numerous collectors (including Loomis himself) to recollect this species on Barro Colorado Island suggests the possibility that his 18-segmented specimens were in fact immatures of a species later described from that locality under other generic and specific names. Redescription of the original type material is an obvious desideratum.

Genus **Harpagonopus** Loomis

Harpagonopus Loomis, 1960, Journ. Kansas Entom. Soc., 33: 58. Type species: *H. confluentus* Loomis, by original designation.

One species, southern California.

Harpagonopus confluentus Loomis

Harpagonopus confluentus Loomis, 1960, Journ. Kansas Entom. Soc., 33: 59, figs. 4, 5. ♂ HT (USNM) from Cottonwood Creek, 45 miles east of San Diego [presumably on US Hy. 80], San Diego Co., California.

Range: Recorded from several localities in San Diego Co., California, and from "14 to 20 miles north of Ensenada" Baja California Norte, Mexico.

Genus **Hexadesmus** Loomis

Hexadesmus Loomis, 1933, Bull. Mus. Comp. Zool., 75: 362. Type species: *H. lateridens* Loomis, by original designation.

One species, Cuba.

Hexadesmus lateridens Loomis

Hexadesmus lateridens Loomis, 1933, Bull. Mus. Comp. Zool., 75: 363, figs. 9, 10. ♀ HT (MCZ) from Jaronu, Prov. ?Camagüey, Cuba.

Range: Definitely known only from the type locality. Records by Loomis (1934) for Haiti, St. Kitts, and Carricou, were based on females possibly referable to other species.

Genus **Irazunus** Attems

Irazunus Attems, 1933, Ann. Naturh. Mus. Wien, 46: 260. Type species: *I. reimoseri* Attems, by original designation. – Loomis, 1964, Fieldiana: Zool., 47: 87 (key to five Panamanian species).

Seven species, Panama, Costa Rica.

Irazunus chiriquensis Loomis

Irazunus chiriquensis Loomis, 1964, Fieldiana: Zool., 47: 87, figs. 8, G-L. ♂ HT (FMNH) from "west of Finca Palo Santo", near Nueva California, Prov.Chiriquí, Panama.

Irazunus minusculus Attems

Irazunus minusculus Attems,. 1933, Ann. Naturh. Mus. Wien, 46: 262, figs. 7-10. ♂ HT (NMW) from "Hamburg Farm", northwest of Port Limón, Prov. Limón, Costa Rica.

Irazunus ovatus Loomis

Irazunus ovatus Loomis, 1964, Fieldiana: Zool., 47: 88, figs. 8, M-N. ♂ HT (FMNH) from Finca Lerida, near Boquete, Prov. Chiriquí, Panama.

Irazunus penicillatus Loomis

Irazunus penicillatus Loomis, 1964, Fieldiana: Zool., 47: 89, figs. 8, O-Q. ♂ HT (FMNH) from "Barca Area, Finca Lerida", near Boquete, Prov. Chiriquí, Panama.

Irazunus reimoseri Attems

Irazunus reimoseri Attems, 1933, Ann. Naturh. Mus. Wien, 46: 260, figs 1-6. ♂ HT (NMW) from Volcán Irazu, 2200 m. [probably on the southeast slope], Prov. Cartago, Costa Rica.

Irazunus uncus Loomis

Irazunus uncus Loomis, 1964, Fieldiana: Zool., 47: 90, figs. 8, R-S. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panama.

Irazunus velaripes Loomis

Irazunus velaripes Loomis, 1964, Fieldiana: Zool., 47: 91, figs. 8, T-V. ♂ HT (FMNH) from El Valle, Prov. Cocle, Panama.

Genus **Irogonus** Loomis

Irogonus Loomis, 1964, Fieldiana: Zool., 47: 92. Type species: *I. reniformis* Loomis, by original designation.

One species, Panama.

Irogonus reniformis Loomis

Irogonus reniformis Loomis, 1964, Fieldiana: Zool., 47: 92, figs. 9, A-E. ♂ HT (FMNH) from Cerro Punta, Prov. Chiriquí, Panama.

Genus **Leiogonopus** Loomis

Leiogonopus Loomis, 1964, Fieldiana: Zool., 47: 93. Type species: *L. echinus* Loomis, by original designation.

Two species, Panama.

Leiogonopus bidentatus Loomis

Leiogonopus bidentatus Loomis, 1947, Fieldiana: Zool., 47: 96. ♀ HT (FMNH) from El Valle, Prov. Cocle, Panama.

Leiogonopus echinus Loomis

Leiogonopus echinus Loomis, 1964, Fieldiana: Zool., 47: 94, figs. 9, F-J. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panama.

Genus **Oodedesmus** Loomis

Oodedesmus Loomis, 1960, Journ. Kansas Entom. Soc., 33: 60. Type species: *O. variabilis* Loomis, by original designation.

Monobasic, Arizona.

Oodedesmus variabilis Loomis

Oodedesmus variabilis Loomis, 1960, Journ. Kansas Entom. Soc., 33: 60, figs. 6, 7 + unnumbered photograph. ♂ HT (USNM) from Fish Creek, east of Phoenix, Maricopa Co., Arizona.

Range: Recorded from localities in Yavapai, Pinal, and Maricopa cos., Arizona.

Genus **Pachygonopus** Loomis

Pachygonopus Loomis, 1964, Fieldiana: Zool., 47: 96. Type species: *P. apiculatus* Loomis, by original designation.

Monobasic, Panama.

Pachygonopus apiculatus Loomis

Pachygonopus apiculatus Loomis, 1964, Fieldiana: Zool., 47: 97, figs. 9,K-M. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panama.

Genus **Phreatodesmus** Loomis

Phreatodesmus Loomis, 1960, Journ. Kansas Entom. Soc., 33: 62. Type species: *P. torreyanus* Loomis, by original designation.

Three (?four) species, California.

Phreatodesmus cooki Loomis

Phreatodesmus cooki Loomis,1960, Journ. Kansas Entom. Soc., 33: 64, fig. 12. ♂ HT (USNM) from Clear Creek at Tehachapi Pass, Kern Co., California.

Phreatodesmus dentatus Loomis

Phreatodesmus dentatus Loomis, 1960, Journ. Kansas Entom. Soc., 33: 64, fig. 13. ♂ HT (USNM) from Cajon Pass, seven miles west of Cajon, San Bernardino Co., California.

Phreatodesmus hastingsus (Chamberlin)

Brachydesmus hastingsus Chamberlin, 1941, Bull. Univ. Utah, 31(11): 27, figs. 48, 49. ♂ HT (USNM) from Hastings Reservation, Monterey Co., California.

Phreatodesmus hastingsus: Loomis, 1960, Journ. Kansas Entom. Soc., 33: 65.

Placement of *hastingsus* in this genus is entirely speculative.

Phreatodesmus torreyanus Loomis

Phreatodesmus torreyanus Loomis, 1960, Journ. Kansas Entom. Soc., 33: 62, figs. 8-11. ♂ HT (USNM) from Torrey Pines near La Jolla, San Diego Co., California.

Range: Recorded from Riverside Co., California, and Baja California Norte, Mexico.

Genus **Pozodesmus** Shear

Pozodesmus Shear, 1986, Speleol. Monogr. Texas Mem. Mus., 1: 78. Type species: *P. poco* Shear, by original designation.

One species, Mexico (Hidalgo).

Pozodesmus poco Shear

Pozodesmus poco Shear, 1986, Speleol. Monogr. Texas Mem. Mus., 1: 78, figs. 34-37. ♂ HT (AMNH) from Sótano del Tres Pozos at Ejido El Sótano, Hidalgo, Mexico.

Genus **Salvadoria** Kraus

Salvadoria Kraus, 1954, Senckenberg. Biol., 35: 314. Type species: *S. alata* Kraus, by original designation.

Seven species, El Salvador, Belize, Chiapas.

Salvadoria alata alata Kraus, new status

Salvadoria alata Kraus, 1954, Senckenb. Biol., 35: 315, figs. 33-35. ♂ HT (SMF) from Laguna Verde, 1600 m., Dept. Ahuachapan, El Salvador.

Salvadoria alata propinqua Kraus

Salvadoria alata propinqua Kraus, 1954, Sneckenb. Biol. 35: 315, fig. 6. ♂ HT (SMF) from Laguna de Las Ranas, 1720-1730 m., Dept. Sonsonate, El Salvador.

Salvadoria argentea Kraus

Salvadoria argentea Kraus, 1954, Senckenb. Biol., 35: 316, figs. 38, 39. ♂ HT (SMF) from Hacienda Los Planes, Sierra de Metapan, Dept. Santa Ana, El Salvador.

Salvadoria beliza Shear

Salvadoria beliza Shear, 1982, Bull. Assoc. Texas Cave Stud., 8: 159, figs. 50-52. ♂ HT (AMNH) from Caves Branch, Cayo District, Belize.

Salvadoria furcata Kraus

Salvaadoria furcata Kraus, 1954, Senckenb. Biol. 35: 316, fig. 37. ♂ HT (SMF) from Monte Cristo, Sierra de Metapan,. Dept. Santa Ana, El Salvador.

Salvadoria mexicana Shear

Salvadoria mexicana Shear, 1982, Bull. Assoc. Texas Cave Stud., 8: 159, figs. 53-55. ♂ HT (AMNH) from Sótano de Cancuc, Chiapas, Mexico.

Salvadoria sagittalis Kraus

Salvadoria sagittalis Kraus, 1954, Senckenb. Biol., 35: 316, fig. 40. ♂ HT (SMF) from Laguna Verde, 1600 m., Dept. Ahauachapan, El Salvador.

Genus **Sumidero** Shear

Sumidero Shear, 1982, Bull. Assoc. Mexican Cave Stud., 8: 155. Type species: *S. sumidero* Shear, by original designation.

Three species, central and northeastern Mexico.

Sumidero pecki (Shear)

Speodesmus pecki Shear, 1974, Acc. Naz. Lincei, Prob. Att. Sci. Cult. 171(2): 273, figs. 55-58. ♂ HT (AMNH) from Cueva del Pachón, Tamaulipas, Mexico.

Sumidero pecki: Shear, 1982, Bull. Assoc. Mexican Cave Stud., 8: 157.

Range: Caves in Tamaulipas (Shear, 1986).

Sumidero sprousei Shear

Sumidero sprousei Shear, 1982, Bull. Assoc. Mexican Cave Stud., 8: 157, figs. 44-45. ♂ HT (AMNH) from Sótano de La Silleta, La Silleta, San Luis Potosí, Mexico.

Sumidero sumidero Shear

Sumidero sumidero Shear, 1982, Bull. Assoc. Mexican Cave Stud., 8: 155. Figs. 39-43. ♂ HT (AMNH) from Sumidero de Cohuatichan, two km south of Cuetzalan, Puebla, Mexico.

Genus **Tichodesmus** Chamberlin

Tichodesmus Chamberlin, 1940, Bull. Univ. Utah, 30(9): 13. Type species: *T. micrus* Chamberlin, by original designation.

One species, Panama.

Tichodesmus micrus Chamberlin

Tichodesmus micrus Chamberlin, 1940, Bull. Univ. Utah, 30(9): 13. HT (USNM) from Barro Colorado Island, Canal Zone, Panama.

Genus **Tylogoneus** Causey

Tylogoneus Causey, 1973, Bull. Assoc. Mexican Cave Stud, 5: 119. Type species: *T. rainesi* Causey, by original designation.

Four species, caves in northeastern Mexico.

Tylogoneus delnegro (Shear)

Caramba delnegro Shear, 1977, Acc. Naz. Lincei. Prob. Att. Sci. Cult., 171(3): 248, figs. 24-28. ♂ HT (AMNH) from Cueva del Negro, near Bochil, Chiapas, Mexico.

Tylogoneus delnegro: Shear, 1982, Bull. Assoc. Mexican Cave Stud., 8: 157.

Tylogoneus minus Causey

Tylogoneus minus Causey, 1973, Bull. Assoc. Mexican Cave Stud. 5: 121, fig. 32. ♂ HT (USNM) from Cueva de Tres Manantiales, 17 km southwest of Gómez Fariás, Tamaulipas, Mexico.

Tylogoneus oyamel Shear

Tylogoneus oyamel Shear, 1982, Bull. Assoc. Mexican Cave Stud., 8: 157, fig. 46. ♂ HT (AMNH) from Sumidero de Oyamel, Conrado Castillo, Tamaulipas, Mexico.

Tylogoneus rainesi Causey

Tylogoneus rainesi Causey, 1973, Bull. Assoc. Mexican Cave Stud., 5: 121, figs. 27-31. ♂ HT (USNM) from Cueva de Poca Ventana, one km west of Xilitla, San Luis Potosí, Mexico.

Range: Also recorded from a cave at San José, Hidalgo, Mexico (Shear, 1986).

Family Pyrgodesmidae Silvestri

Pyrgodesmidae Silvestri, 1896, Ann. Mus. Civ. Stor, Nat. Genova, 36: 192 (March).

Stylodesmidae Cook, 1896, Proc. U. S. Nat. Mus., 18: 82 (April).

Chytodesmidae Cook, 1896, Brandtia, 5: 20.

Stiodesmidae Cook, 1896, Brandtia, 5: 25.

Decaporodesmidae Kenyon, 1899, Proc. Entom. Soc. Washington, 4: 299.

Idiurodesmini Silvestri, 1924, Boll. Lab. Zool. Gen. Agr. Portici, 17: 172.

Ceratesmidae Chamberlin, 1942, Bull. Univ. Utah, 33(4): 10.

Stenotodesminae Causey, 1971, Bull. Assoc. Mexican Cave Stud., 4: 28.

Pyrgodesmidae Hoffman, 1980, Classification of the Diplopoda, p. 179.

The foregoing list does not include suprageneric taxon names based on genera (mostly monotypic) in other parts of the world and not recorded from the Neotropics.

The problems that beset the study of this group have been stated several times in recent years and need not be repeated here. I only want to observe that so many of the generic names have been based on the peripheral characters of single species (often known only from females), such as number of body segments (rings), distribution of ozopores, tergal ornamentation, and number of collum lobes, and too often published without any illustrations. It is not surprising that a "backlash" developed against such abuses in recent years, and genera redefined on the basis of gonopodal characters, resulting in some astonishing rosters of synonymical generic names. In the virtual lack of personal experience I have had no option than to adopt, as basically reasonable, such amalgamations as published. Yet I would invoke the admonition about "throwing the baby out with the bathwater" since gonopodal similarities may well be reflecting relationships at the tribal level, and more refined later studies may show gonopod-taxa to correspond to some of the body-form genera. The difficulties of studying and illustrating the minute gonopods impede the recognition of both homologies and homoplasies.

I am by no means satisfied that the Pyrgodesmidae, as treated by me in 1980 (and here) is monophyletic. Certainly I was wrong to consider the Eoromidae as a pyrgodesmid, and a careful examination of the original description suggests to me the strong possibility of some chelodesmoid affinity.

Loomis (1941: 67) provided a key to the nine West Indian genera (except *Chytodesmus* itself) of "Chytodesmidae", i.e., those forms of pyrgodesmids which lack porosteles. While that character is now known to be of specific importance only, the millipeds referred by Cook and Loomis to Chytodesmidae have a distinct *Gestalt* and one wonders if some other, so-far overlooked character, might not vindicate Cook's perception.

Genus **Airocaulon** Loomis

Airocaulon Loomis, 1964, Fieldiana: Zool., 47: 66. Type species: *A. humerosum* Loomis, by original designation.

One species, Panama.

Airocaulon humerosum Loomis

Airocaulon humerosum Loomis, 1964, Fieldiana: Zool., 47: 66, figs. 6, E-H. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panama.

Genus **Berlesedesmus** Loomis

Berlesedesmus Loomis, 1975, Florida Entom., 58: 169. Type species: *B. flagellipes* Loomis, by original designation.

One species, Jamaica.

Berlesedesmus flagellipes Loomis

Berlesedesmus flagellipes Loomis, 1975, Florida Entom., 58: 169, fig. 3. ♂ HT (FSCA) from Whitfield Hall, 4200 ft., St. Thomas Par., Jamaica.

Range: Recorded from St. Thomas, St. Ann, and Trelawney parishes, Jamaica.

Genus **Botrydesmus** Loomis

Botrydesmus Loomis, 1934, Smithsonian Misc. Coll., 89(14): 62. Type species: *B. lutosus* Loomis, by original designation.

Prionodesmus Loomis, 1959, Journ. Kansas Entom. Soc., 32: 7. Type species: *P. fulgens* Loomis, by original designation. Synonymized by Loomis, 1964.

Five species, Panama, northern South America (Trinidad).

Botrydesmus biramosus Loomis

Botrydesmus biramosus Loomis, 1964, Fieldiana: Zool., 47: 68, fig. 6, I. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panama.

Botrydesmus conifer Loomis

Botrydesmus conifer Loomis, 1964, Fieldiana: Zool., 47: 68, figs. 6, J-K. ♂ HT (FMNH) from a site along the road west of Finca Palo Santo, near Nueva California, Prov. Chiriquí, Panama.

Botrydesmus cryptus Chamberlin

Botrydesmus cryptus Chamberlin, 1940, Bull. Univ. Utah, 30(9): 6. ♀ HT (USNM) from Barro Colorado Island, Canal Zone, Panama.

Whether this species is actually a *Botrydesmus* is purely speculative.

Botrydesmus fulgens (Loomis)

Prionodesmus fulgens Loomis, 1959, Journ. Kansas Entom. Soc., 32: 7, figs. 17-20. ♂ HT (USNM) from Barro Colorado Island, Canal Zone, Panama.

Botrydesmus coronatus Loomis, 1961, Proc. U. S. Nat. Mus., 113: 96, figs. 3k-m. ♂ HT (USNM) from Barro Colorado Island, Canal Zone, Panama. Synonymized by Loomis, 1964.

Range: Recorded (but from females only) also from Chiriquí and Panama provinces.

Genus **Calymmodesmus** Carl

Calymmodesmus Carl, 1914, Mém. Soc. neuchâteloise Sci. natur., 5: 959. Type species: *C. andinus* Carl, by monotypy.

Yucodesmus Chamberlin, 1938, Publ. Carnegie Inst. Washington, 491: 178. Type species: *Y. viabilis* Chamberlin, by original designation. Synonymized by Shear, 1973.

16 species, Oaxaca and Yucatan to central Colombia.

Calymmodesmus alienus (Chamberlin)

Yucodesmus alienus Chamberlin, 1938, Publ. Carnegie Inst. Washington, 491: 180, figs. 46-48. ♂ HT (USNM), thought to have been collected in Hoctun Cave, Hoctun, Yucatan, Mexico.

Calymmodesmus biensifer Loomis

Calymmodesmus biensifer Loomis, 1959, Journ. Kansas Entom. Soc., 32: 4, fig. 6. ♂ HT (USNM) from Loma Bonita, 20 km south of Tuxtepic, Oaxaca, Mexico.

Calymmodesmus dampfi (Chamberlin)

Yucodesmus dampfi Chamberlin, 1947, Pan-Pacific Entom, 23: 101, fig. 1. ♂ HT (USNM) from Hacienda Sayula, west of Veracruz, Veracruz, Mexico.

Calymmodesmus falcatus Loomis

Calymmodesmus falcatus Loomis, 1959, Journ. Kansas Entom. Soc., 32: 2, fig. 3. ♂ HT (USNM) from Barro Colorado Island, Canal Zone, Panama.

Calymmodesmus formicatus Loomis

Calymmodesmus formicatus Loomis, 1959, Journ. Kansas Entom. Soc., 32: 2, figs. 1, 2. ♂ HT (USNM) from Barro Colorado Island, Canal Zone, Panama.

Calymmodesmus gracilis Loomis

Calymmodesmus gracilis Loomis, 1959, Journ. Kansas Entom. Soc., 32: 4, fig. 5. ♂ HT (USNM) from Barro Colorado Island, Canal Zone, Panama.

Calymmodesmus hoctunanus (Causey)

Yucodesmus hoctunanus Causey, 1971, Bull. Assoc. Mexican Cave Stud. , 4: 28, figs. 14, 15. ♂ HT (USNM) from Hoctún Cave, at Hoctún, Yucatan, Mexico. Synonymized by Shear, 1973.

Calymmodesmus inquinatus Causey

Calymmodesmus inquinatus Causey, 1960, Proc. Biol. Soc. Washington, 73: 276, fig. 00. ♂ HT (?) from Gruta el Salvino, 34 km west of Puerto Barrios, Dept. Izabal, Guatemala.– Shear, 1973, Acc.Naz. Lincei, Prob. Att. Sci. Cult. 171: 285, figs. 76, 77.

Calymmodesmus isidricus (Chamberlin)

Yucodesmus isidricus Chamberlin, 1938, Publ. Carnegie Inst. Washington, 491: 179, fig. 51. ♂ HT (USNM) from San Isidro cave, Merida, Yucatan, Mexico.

Calymmodesmus mexicanus Loomis

Calymmodesmus mexicanus Loomis, 1959, Journ. Kansas Entom. Soc., 32: 5, figs. 7, 8. ♂ HT (USNM) from Loma Bonita, 20 km south of Tuxtepic, Oaxaca, Mexico.

Calymmodesmus montanus Loomis

Calymmodesmus montanus Loomis, 1964, Proc. Biol. Soc. Washington, 77: 187, fig. 7-9. ♂ HT (USNM) from Monteverde, Prov. Puntarenas, Costa Rica.

Calymmodesmus muruztunicus (Chamberlin)

Yucodesmus muruztunicus Chamberlin, 1938, Publ. Carnegie Inst. Washington, 491: 182, figs. 49, 50. ♂ HT (USNM) from Murutzun Cave, Tizamin, Yucatan, Mexico.

Calymmodesmus rettenmeyeri Loomis

Calymmodesmus rettenmeyeri Loomis, 1959, Journ. Kansas Entom. Soc., 32: 2, figs. 11-16. ♂ HT (USNM) from Barro Colorado Island, Canal Zone, Panama

Calymmodesmus sodalis Schubart

Calymmodesmus sodalis Schubart, 1952, An. Acad. Brasileira Cienc., 24: 438, figs. 1-8. ♂ HT (Mus. Zool. Univ. Sao Paulo), from Costa Rica without further locality, but possibly from "Hamburg Farm" northwest of Puerto Limón, Prov. Limón.

Calymmodesmus viabilis (Chamberlin)

Yucodesmus viabilis Chamberlin, 1938, Publ. Carnegie Inst. Washington, 491: 179, figs. 42-45. ♂ HT (USNM) from Luchil Cave, Tixcacal, Yucatan, Mexico.

Genus **Calyptodesmus** Schubart

Calyptodesmus Schubart, 1944, Acta Zool. Lilloana, 2: 367. Type species: *C. sanctus* Schubart, 1944, by original designation.

Anartiodesmus Silvestri, 1947, Boll. Lab. ent. agr. Portici, 8: 27. Type species: *A. myrmophilus* Silvestri, by original designation. Synonymized by Schubart, 1954.

One species, Argentina and Brasil, introduced into Florida where now widespread.

Calyptodesmus sanctus Schubart

Calyptodesmus sanctus Schubart, 1944, Acta Zool. Lilloana, 2: 368, fig. 38. ♀ HT (MZUSP) from Cachoeira, Edo. São Paulo, Brasil.– Hoffman, 1993, Insecta Mundi, 7: 191.

Anartiodesmus myrmophilus Silvestri, 1947, Boll. Lab. ent. agr. Portici, 8: 27, figs. XIII, 114. ♀ HT (LEAP) from La Plata, Argentina. Synonymized by Hoffman, 1993..

Calyptodesmus schubarti Causey, 1960, Florida Entom., 43: 148, fig. 1. ♀ HT (AMNH) from Lake City, Columbia Co., Florida. Synonymized by Hoffman, 1993.

Range: Northwestern Argentina, Paraguay, southeastern Brasil; introduced into Florida where now almost statewide.

Genus **Catapleuradesmus** Loomis

Catapleuradesmus Loomis, 1964, Fieldiana: Zool., 47: 71. Type species: *C. diadematus* Loomis, by original designation.

One species, Panama.

Catapleuradesmus diadematus Loomis

Catapleuradesmus diadematus Loomis, 1964, Fieldiana: Zool., 47: 72, figs. 6, L-Q. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panama.

Genus **Chytodesmus** Cook

Chytodesmus Cook, 1896, Brandtia, 5: 20. Type species: *Cryptodesmus laqueatus* Karsch, 1880, by original designation.

One species, Cuba.

Chytodesmus laqueatus (Karsch)

Cryptodesmus laqueatus Karsch, 1880, Mitt. Münchner Entom. Ver. 4: 141. ♂♀ ST (ZMB) from "Cuba" without further locality.

Genus **Coccoelasma** Loomis

Coccoelasma Loomis, 1936, Bull. Mus. Comp. Zool., 80: 167. Type species: *C. incisura* Loomis, by original designation.

One species, Hispaniola.

Coccoelasma incisura Loomis

Coccoelasma incisura Loomis, 1936, Bull. Mus. Comp. Zool., 80: 16, figs. 71a, b; pl. 3, fig. 4. ♂ HT (USNM) from Île de Cabret near Bayeux, Haiti.

Genus **Cryptyma** Chamberlin

Cryptyma Chamberlin, 1943, Bull. Univ. Utah, 34(7): 66. Type species: *C. lobata* Chamberlin, by original designation.

Three species, Veracruz to Guatemala.

Cryptyma cocona Shear

Cryptyma cocona Shear, 1973, Acc. Naz. Lincei, Prob. Att. Sci. Cult. 171(2): 291, figs. 89-91. ♂ HT (AMNH) from Grutas de Coconá, Teapa, Tabasco, Mexico.

Cryptyma guatemala Shear

Cryptyma guatemala Shear, 1973, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(2): 289, figs. 87, 88. ♂ HT (AMNH) from Cueva Lanquin at Lanquin, Dept. Alta Verapaz, Guatemala.

Cryptyma lobata Chamberlin

Cryptyma lobata Chamberlin, 1943, Bull. Univ. Utah, 34(7): 66, figs. 160-161. ♀ HT (USNM) from Fortin de las Flores, Veracruz, Mexico.

Genus **Cynedesmus** Cook

Cynedesmus Cook, 1895, Ann. New York Acad. Sci., 9: 5. Type species: *Cryptodesmus ornamentatus* Karsch, by monotypy.

Augesmus Chamberlin, 1951, Publ. Cult. Comp. Diam. Angola, 10: 76. Type species: *Cynedesmus varilobatus* Loomis, by original designation. **New synonymy**!

Three species, West Indies, Panama. This is implausible as a natural generic range; either the genus is heterogeneous or some anthropogenic distribution has occurred.

As noted by Jeekel (1972: 320), the species designated by Cook as type of *Cynedesmus* (*formicola* Ck.) was not described in 1895, and thus unavailable as type species. The other included species, *ornamentatus* Karsch, became *ipso facto* the type by monotypy. Chamberlin was not aware of this technicality when he proposed *Augesmus* on the grounds that *formicola* (of which he had inherited Cook's original drawings of the type specimen) was not zoologically congeneric with the several West Indian species later proposed in *Cynedesmus*.

Whether the following three species are really congeneric cannot be assumed until the characters of *C. ornamentatus* have been ascertained. At that time the generic status of *formicola*, currently orphaned, can be established.

Cynedesmus ornamentatus (Karsch)

Cryptodesmus ornamentatus Karsch, 1880, Mitt. Münchner entom. Ver., 4: 142. Imm. ♂ HT (ZMB) from "Cuba" without further locality.

Cynedesmus ornamentatus: Cook, 1895, Ann. New York Acad. Sci., 9: 5.

Augesmus ornamentatus: Chamberlin, 1951, Publ. Cult. Companh. Diam. Angola, 10: 76.

Cynedesmus trinus Loomis

Cynedesmus trinus Loomis, 1959, Journ. Kansas Entom. Soc., 32: 5, figs. 9, 10. ♂ HT (USNM) from Monte Lirio, Canal Zone, Panama.

Augesmus trinus: Loomis, 1964, Fieldiana: Zool., 47: 67.

Cynedesmus varilobatus Loomis

Cynedesmus varilobatus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 184, fig. 75. ♂ HT (USNM) from a site "...near the road going down the hill east of Petit Goave from Leogoane.....:", Haiti.

Genus **Cyphotylus** Loomis

Cyphotylus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 170. Type species: *C. prolatus* Loomis, by original designation.

One species, Hispaniola.

Cyphotylus prolatus Loomis

Cyphotylus prolatus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 172, fig. 72. Imm. ♂ HT (USNM) from Morne Brigand, near Bayeux, Haiti.

Genus **Darlingtoniella** Loomis

Darlingtoniella Loomis, 1938, Bull. Mus. Comp. Zool., 82: 474. Type species: *D. provecta* Loomis, by original designation.

One species, Cuba.

Darlingtoniella provecta Loomis

Darlingtoniella provecta Loomis, 1938, Bull. Mus. Comp. Zool., 82: 475, figs. 26a-f. ♂ HT (MCZ) from Sierra de Trinidad, 2500-3500 ft., Buenos Aires, Prov. Santa Clara, Cuba.

Genus **Decaporodesmus** Kenyon

Decaporodesmus Kenyon, 1899, Proc. Entom. Soc. Washington, 4: 299. Type species: *D. motzoranginis* Kenyon, by monotypy.

Oligodesmus Gill, 1899, Proc. Entom. Soc. Washington, 4: 300. Invalid replacement name for *Decaporodesmus,* with the same type species. Preoccupied by *Oligodesmus* Attems, 1898.

One species, Mexico.

If a synonym of *Myrmecodesmus,* as suspected by Shear (1977:252), this name has 11 years priority over Silvestri's.

Decaporodesmus motzoranginis Kenyon

Decaporodesmus motzoranginis Kenyon, 1899, Proc. Entom. Soc. Washington, 4: 299. HT (location unknown) from Motzorango, Veracruz, Mexico.

Genus **Dicropus** Loomis

Dicropus Loomis, 1972, Florida Entom, 55: 193. Type species: *D. tecticaudatus* Loomis, by original designation.

One species: Costa Rica.

Dicropus tecticaudatus Loomis

Dicropus tecticaudatus Loomis, 1972, Florida Entom., 55: 193, figs. 15-16. ♂ HT (USNM) from Hamburg Farm, northwest of Puerto Limón, Prov. Limón, Costa Rica.

Genus **Dilophops** Loomis

Dilophops Loomis, 1934, Smithsonian Misc. Coll. 89(14): 59. Type species: *D. bullatus* Loomis, by original designation.

One species, Hispaniola.

Dilophops bullatus Loomis

Dilophops bullatus Loomis, 1934, Smithsonian Misc. Coll., 89(14): 61, figs. 30a-c, pl. 4, fig. 4. ♂ HT (USNM) from "...an eighth of a mile from the beach at Bayeux, Haiti."

Genus **Docodesmiella** Loomis

Docodesmiella Loomis, 1961, Proc. U. S. Nat. Mus., 113: 80. Type species: *D. insularis* Loomis, by original designation.

Three species, Panama.

Docodesmiella insularis Loomis

Docodesmiella insularis Loomis, 1961, Proc. U. S. Nat. Mus., 113: 81, figs. 1g-i. ♂ HT (USNM) from Berro Colorado Island, Canal Zone, Panama.

Docodesmiella magna Loomis

Docodesmiella magna Loomis, 1964, Fieldiana: Zool., 47: 20, figs. 1, N-S. ♂ HT (FMNH) from Finca Lerida near Boquete, Prov. Chiriquí, Panama.

Docodesmiella spathulata Loomis

Docodesmiella spathulata Loomis, 1964, Fieldiana:Zool., 47: 21, figs. 1, T-U, 2,A-B. ♂ HT (FMNH) from Finca Lerida near Boquete, Prov. Chiriquí, Panama.

Genus **Docodesmus** Cook

Aporodesmus Pocock, 1895, Ann. Mus civ. Stor. nat. Genova, 34: 789. Type species: *Cryptodesmus vincentii* Pocock, 1894, by original designation. Preoccupied by *Aporodesmus* Porat, 1894.

Docodesmus Cook, 1896, Brandtia 2: 5. Type species: *Cryptodesmus vincentii* Pocock, 1894, by direct substitution. – Loomis, 1972, Florida Entom., 52: 249 (key to the 13 then-known species).

Schizodira Loomis, 1941, Psyche, 48: 37. Type species: *Stenonia maculata* Bollman, 1888, by original designation. Synonymized by Loomis, 1950.

18 species, West Indies, northern South America.

Docodesmus alifer Loomis

Docodesmus alifer Loomis, 1941, Bull. Mus. Comp. Zool., 88: 68, figs. 26a-c. ♀ HT (MCZ) from Pico del Yaque, Loma Rucilla, Republica Dominicana.

Docodesmus angustus Loomis

Docodesmus angustus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 71, figs. 29a-d. ♂ HT (MCZ) from Valle Nuevo, southeast of Constanza, Republica Dominicana.

Docodesmus brodzinskyi Shear

Docodesmus brodzinskyi Shear, 1981, Myriapodologica, 1: 53, figs. 1, 2. HT (Brodzinsky Coll., Santo Domingo, R.D.), in amber thought to be of Oligocene age, from an uncertain locality in the Republica Dominicana.

It is entirely possible that this species represents a pyrgodesmid still living in Hispaniola.

Docodesmus cooki Loomis

Docodesmus cooki Loomis, 1969, Florida Entom., 52: 248, figs. 8-10. ♂ HT (USNM) labeled "Etowah, Tennessee."

Despite the biogeographic implausibility of a docodesmid in the southern Appalachians, Loomis (1969) was at pains to discount the possibility of a mix-up of material by Cook. That Cook was not infallible is attested by the case of two rhachodesmids labeled as "Haiti?" and later re-attributed by him to Panama (cf. Loomis, 1971: 175, who deduced the correct origin as Nicaragua!). More likely, a museum preparator, not Cook, could have made the mistake in labeling the *Docodesmus*..

Docodesmus coxalis Loomis

Docodesmus coxalis Loomis, 1975, Florida Entom., 58: 170, fig. 4. ♂ HT (FSCA) from one mile south of Claremont, St. Ann Parish, Jamaica.

Docodesmus cubensis Loomis

Docodesmus cubensis Loomis, 1937, Bull. Mus. Comp. Zool., 80: 225, figs. 13, 14. ♂ HT (MCZ) from Soledad, Prov. Cienfuegos, Cuba; 1938, Bull. Mus. Comp. Zool., 82: 473, fig. 25.

Range: Aside the type locality, recorded from Pico Turquino, Provs. Granma-Santiago de Cuba, Cuba.

Docodesmus eggletoni Velez

Docodesmus eggletoni Velez, 1967, Caribbean Journ. Sci., 7: 28, figs. 7-9. ♂ HT (USNM) from Hy. 119, nine km north of San German, Puerto Rico.

Range: Westernmost third of Puerto Rico (map, Velez, 1967, map II).

Docodesmus grenadae Chamberlin

Docodesmus grenadae Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 219. ♂ HT (MCZ) from Grand Etang, Grenada, Lesser Antilles. – Loomis, 1937, Bull. Mus. Comp. Zool. 80: 226, figs. 15, 16.

Docodesmus griseus Loomis

Docodesmsus griseus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 69, fig. 27. ♂ HT (MCZ) from Sanchez, Republica Dominicana.

Docodesmus haitiensis Chamberlin

Docodesmus haitiensis Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 216. ♂ HT (MCZ) from Diquini, Haiti. – Loomis, 1934, Smithsonian Misc. Coll. 89(14): 45, pl. 3, figs. 1, 2; 1941, Bull. Mus. Comp. Zool., 88: 71. Figs. 28a, b.

Range: Recorded from over a dozen localities in Haiti and northern Republica Dominicana..

Docodesmus maculatus (Bollman)

Stenonia maculata Bollman, 1888, Proc. U. S. Nat. Mus., 11: 336. ♂ HT (unknown, ♀ PT at USNM), from Cuba, without further locality.

Schizodira maculata: Loomis, 1941, Psyche, 48: 37.

Docodesmus maculatus: Loomis, 1950, Journ. Washington Acad. Sci., 40: 166.

Docodesmus maldonadoi Velez

Docodesmus maldonadoi Velez, 1967, Caribbean Journ. Sci., 7: 27, fig. 6. ♂ HT (USNM) from Km 4.4 on the Sabana Road at 1,850 ft., near El Yunque, Puerto Rico.

Docodesmus parvior Chamberlin

Docodesmus parvior Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 218. ♀ HT (MCZ) from Furcy, Haiti. – Loomis, 1936, Bull. Mus. Comp. Zool. 80: 162, pl. 3, fig. 3.

Range: Recorded from seven Haitian localities.

Docodesmus sculpturatus Loomis

Docodesmus sculpturatus Loomis, 1934, Smithsonian Misc. Coll. 89(14): 45, fig. 22, pl. 4, fig. 1. ♂ HT (USNM) from a "banana hole" three or four miles from Nassau, New Providence, Bahama Islands. – Velez, 1967, Caribbean Journ. Sci., 7: 26.

Range: Velez (1967, map II) shows two localities attributed to this species in central Puerto Rico. If the identification is correct, the occurrence of *sculpturatus* on New Providence must surely be the result of anthropochorism.

Docodesmus semiseptus Loomis

Docodesmus semiseptus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 163, fig. 69. ♂ HT (USNM) from Morne Pilboreau, above Ennery, Haiti.

Docodesmus vidalius Velez

Docodesmus vidalius Velez, 1967, Caribbean Journ. Sci., 7: 24, figs. 2-5. ♂ HT (USNM) from Km 10.7 on Hy. 146, about ten km southwest of Ciuales, Puerto Rico.

Docodesmus vincentii (Pocock)

Cryptodesmus vincentii Pocock, 1894, Journ. Linnean Soc. London, 24: 510, pl. 39, figs. 2-2d. HT (BMNH) from St. Vincent, Lesser Antilles.

Docodesmus vincentii: Cook, 1896, Brandtia, 2: 5.

Genus **Fennellia** Loomis

Fennellia Loomis, 1941, Journ. Washington Acad. Sci., 31: 194. Type species: *F. ovipes* Loomis, by original designation.

One species, Hispaniola.

Fennellia ovipes Loomis

Fennellia ovipes Loomis, 1941, Journ. Washington Acad. Sci., 31: 195, figs. 13-17. ♂ HT (USNM) from Jeremie, Haiti.

Genus **Henicomus** Loomis

Henicomus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 78. Type species: *H. septiporus* Loomis, by original designation.

One species, Hispaniola.

Henicomus septiporus Loomis

Henicomus septiporus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 79, figs. 33a, b. ♀ HT (MCZ) from Loma Vieja, 6,000 ft., Cordillera Central south of Constanza, Republica Dominicana.

Genus **Heteropente** Loomis

Heteropente Loomis, 1933, Bull. Mus. Comp. Zool., 75: 360. Type species: *H. planifrons* Loomis, by original designation.

One species, Cuba.

Heteropente planifrons Loomis

Heteropente planifrons Loomis, 1933, Bull. Mus. Comp. Zool., 75: 361, figs. 7, 8. ♂ HT (MCZ) from Jatibonico, Prov. Ciego de Ávila, Cuba.

Styraxodesmus cubensis Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelpha, 99: 21, fig. 1. ♂ HT (ANSP) from Modana, Tapaste, Prov.?, Cuba. Synonymized by Loomis & Hoffman, 1948.

Range: Recorded from several localities in central Cuba.

Genus **Idiurodesmus** Silvestri

Idiurodesmus Silvestri, 1924, Boll. Lab. Zool. gen. agr. Portici, 17: 172. Type species: *I. tristani* Silbestri, by original designation.

One species, Costa Rica.

Idiurodesmus tristani Silvestri

Idiurodesmus tristani Silvestri, 1924, Boll. Lab. Zool. gen. agr. Portici, 17: 175, figs. 1-12. ♂ HT (LEAP) from Turrúcares, ca. 15 km southwest of Alajuela, Prov. Alajuela, Costa Rica.

Genus **Iomoides** Loomis

Iomoides Loomis, 1934, Smithsonian Misc. Coll., 89(14): 49. Type species: *I. hispidus* Loomis, by original designation.

Four species, Hispaniola.

Iomoides conjunctus Loomis

Iomoides conjuncta Loomis, 1941, Bull. Mus. Comp. Zool., 88: 76, fig. 32. ♂ HT (MCZ) from Villa Altagracia, Republica Dominicana.

Iomoides glabrus Loomis

Iomoides glabra Loomis, 1934, Smithsonian Misc. Coll., 89(14): 53, fig. 26, pl. 3, fig. 5. ♂ HT (USNM) from Christoph's Citadel, Cape Haitien, Haiti.

Iomoides hispidus Loomis

Iomoides hispidus Loomis, 1934, Smithsonian Misc. Coll. 89(14): 51, figs. 25a-c, pl. 3, figs. 3, 4. ♂ HT (USNM) from Morne Brigand, near Bayeux, Haiti.

Iomoides parallelus Loomis

Iomoides parallela Loomis, 1941, Bull. Mus. Comp. Zool., 88: 75, fig. 31. ♂ HT (MCZ) from Sanchez, Republica Dominicana.

Genus **Iomus** Cook

Iomus Cook, 1911, Proc. U. S. Nat. Mus., 40: 455. Type species: *I. incisus* Cook, by original designation.

Four species, Puerto Rico, one, Guadeloupe (lack of species from Hispaniola remarkable).

Iomus incisus Cook

Iomus incisus Cook, 1911, Proc. U. S. Nat. Mus., 40: 458, fig. 4. ♂ HT (?USNM) from a site near Mayaguez, Puerto Rico.

Iomus obliquus Cook

Iomus obliquus Cook, 1911, Proc. U. S. Nat. Mus., 40: 460. ♀ HT (?USNM) from a site near Bayamon, Puerto Rico.

Iomus platanus Cook

Iomus platanus Cook, 1911, Proc. U. S. Nat. Mus. 40: 459. ♀ HT (?USNM) from Barrio Plata, Puerto Rico.

Iomus recentus Chamberlin

Iomus recentus Chamberlin, 1950, Proc. Biol. Soc. Washington, 63: 149. ♀ HT (USNM) from Toro Negro, Villalba, Puerto Rico.

Iomus thibaudi Mauriès

Iomus thibaudi Mauriès, 1980, Bull. Mus. natn. Hist. nat., Paris, (4) 2A: 1067, figs. 7-13. ♂ HT (MHNP) from Mamelle de Petit-Bourg, Basse-Terre, Guadeloupe.

Genus **Jeekelia** Loomis

Melanodesmus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 73. Type species: *M. granulosus* Loomis, by original designation. Preoccupied by *Melanodesmus* Carl, 1914.

Jeekelia Loomis, 1950, Journ. Washington Acad. Sci. 40: 166 .New name for *Melanodesmus* Loomis, 1941, *ipso facto* with the same type species.

One species, Hispaniola.

Jeekelia granulosa (Loomis)

Melanodesmus granulosus Loomis, 1941, Bull. Mus. Comp. Zool., 88: 74, figs. 30a-c. ♀ HT (MCZ) from ". . .between 5,000 and 8,000 feet elevation, Loma Rucilla and mountains north, Cordillera Central", Republica Dominicana.

Jeekelia granulosa: Loomis, 1950, Journ. Washington Acad. Sci., 40: 166.

Genus **Kapyrodesmus** Attems

Xerodesmus Chamberlin, 1923, Proc. California Acad. Sci., (4) 12: 403. Type species: *X. mulegensis* Chamberlin, by original designation. Preoccupied by *Xerodesmus* Cook, 1896.

Kapyrodesmus Attems, 1940, Das Tierreich, 70: 322. Type species: *Xerodesmus mulegensis* Chamberlin, 1923, by direct substitution (new name for *Xerodesmus* Chamberlin).

One species, Mexico (Baja California).

Kapyrodesmus mulegensis (Chamberlin)

Xerodesmus mulegensis Chamberlin, 1923, Proc. California Acad. Sci., (4) 12: 403, figs. 36-38. ♀ HT (CAS) from Mulegé, Baja California Sur, Mexico.

Kapyrodesmus mulegensis: Attems, 1940, Das Tierreich, 70: 323.

Genus **Karukeromus** Mauriès

Karukeromus Mauries, 1980, Bull. Mus.natn. Hist. nat, Paris, (4) 2A: 1078. Type species: *K. delamarei* Mauriès, by monotypy.

One species, Guadeloupe.

Karukeromus delamarei Mauriès

Karukeromus delamarei Mauriès, 1980, Bull. Mus. natn. Hist. nat., Paris, (4) 2A: 1079, figs. 27-30. ♂ HT (MHNP) from Capesterre-l'Habituée, 500 m, Basse-Terre, Guadeloupe.

Genus **Liomus** Chamberlin

Liomus Chamberlin, 1950, Proc. Biol. Soc. Washington, 63: 149. Type species: *L. albanus* Chamberlin, by original designation.

Three species, Puerto Rico (Velez, 1967, Map II, plots localities for all three species).

Liomus albanus Chamberlin

Liomus albanus Chamberlin, 1950, Proc. Biol. Soc. Washington, 63: 149, figs. 1-3. ♀ HT (USNM) from Toro Negro, Villalba, Puerto Rico.

Liomus obscurus Chamberlin

Liomus obscurus Chamberlin, 1950, Proc. Biol. Soc. Washington, 63: 150. ♀ HT (USNM) from the Maricao Insular Forest, between San Germán and Maricao, Puerto Rico.

Liomus ramosus Velez

Liomus ramosus Velez, 1967, Caribbean Journ. Sci., 7: 24, fig. 1. ♂ HT (USNM) from the Maricao Insular Forest, Puerto Rico.

Genus **Lobodesmus** Loomis

Lobodesmus Loomis, 1936, Bull. Muss. Comp. Zool. 80: 164. Type species: *L. granosus* Loomis, by original designation.

One species, Hispaniola.

Lobodesmus granosus Loomis

Lobodesmus granosus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 165, fgis. 70a-d. ♂ HT (MCZ) from Morne La Hotte, 3000-7000 ft., Haiti.

Genus **Lophodesmus** Pocock

Lophodesmus Pocock, 1894, in: Weber, Zool. Ergebn. Reise Niederlandisch Ost-Indien, 3: 372. Type species: *L. pusillus* Pocock, by monotypy.

East Indies, number of species uncertain; ten Mesamerican species are referred here provisionally.

This generic name embraces a taxonomic house of cards. There is no assurrance that any of the New World species are congeneric with the type from Flores and it seems clear that several genera are represented by the following roster of names. In effect, nobody should take "Lophodesmus" seriously at the present.

Lophodesmus bituberculatus Loomis

Lophodesmus bituberculatus Loomis, 1970, Florida Entom., 53: 130, fig. 1. ♂ HT (USNM) from Cueva Pajita, Lares, Puerto Rico.

Loomis (MS notes) considered this species to be referable to *Cynedesmus.*

Lophodesmus caraibianus (Chamberlin)

Treseolobus caraibianus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 220. ♀ HT (MCZ) from Mandeville, Haiti.

Lophodesmus caraibianus: Loomis, 1934, Smithsonian Misc. Coll., 89(14): 59; 1936, Bull. Mus. Comp. Zool., 80: 186, pl. 3, fig. 8.

Loomis (MS notes) considered this species to be referable to *Cynedesmus.*

Lophodesmus celatus Pocock

Lophodesmus celatus Pocock, 1909, Biol. Centr.-Amer., Diplop., p. 133, pl. X, fig. 2,2a. ♀ ST (BMNH) from Volcán de Agua, Dept. Sacatepéquez, Guatemala.

Lophodesmus italolegatus Shear

Lophodesmus italolegatus Shear, 1973, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(2): 286, figs. 78-82. ♂ HT (AMNH) from Cueva de la Golondrina, Bochil, Chiapas, Mexico.

Range: Recorded also from caves near Finca Santa Anita, Chiapas.

Lophodesmus perparvus Pocock

Lophodesmus perparvus Pocock, 1909, Biol. Centr.-Amer., Diplop., p. 133, pl. X, figs. 2, 2a. ST (BMNH) from Volcán de Agua, Dept. Sacatepéquez, Guatemala .– Hoffman, 1976, Rev. suisse Zool., 83: 311, fig. 2 (gonopod of syntype).

Lophodesmus petrinus Hoffman

Lophodesmus petrinus Hoffman, 1976, Rev. suisse Zool., 83: 312, figs. 7-12. ♂ HT (MHNG) from Cueva Chirripeck, south of Coban, Dept. Alta Verapaz, Guatemala.

Range: Known also from Cueva Agua Escondida at El Tobacal, Dept. Huehuetango, Guatemala.

Lophodesmus rodriquezi Shear

Lophodesmus rodriquezi Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(3): 261, figs. 53-56. ♂ HT (AMNH) from Sima I del Tempisque, Chiapas, Mexico.

Lophodesmus shawcrossi Shear

Lophodesmus shawcrossi Shear, 1977, Acc. Naz. Lincei Prob. Att. Sci. Cult., 171(3): 263, figs. 49-52. ♂ HT (AMNH) from Cueva Agua Escondida, El Tobacal, Dept. Hueheutenango, Guatemala.

Lophodesmus zullinii Shear

Lophodesmus zullinii Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult. 171(3): 263, figs. 45-48. ♂ HT (AMNH) from Grutas de Llano Grande, La Grandeza, Huixtla, Chiapas.

Genus **Myrmecodesmus** Silvestri

Myrmecodesmus Silvestri, 1910, Zool. Anz., 35: 539. Type species: *M. formicarius* Silvestri, by monotypy. – Hoffman, 1973, Proc. Biol Soc. Washington, 86: 511. – Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171: 253.

Ilyma Chamberlin, 1941, Bull. Univ. Utah, 31(11): 24. Type species: *I. orizaba* Chamberlin, by original designation. Synomymized by Hoffman, 1973.

Bolivaresmus Chamberlin, 1942, Bull. Univ. Utah, 33(4): 10. Type species: *B. sabinus* Chamberli, by original designation. Synonymized by Shear, 1977.

Ceratesmus Chamberlim, 1942, Bull. Univ. Utah, 33(4) : 10. Type species: *C. clarus* Chamberlin, by original designation. Synonymized by Shear, 1977.

Apsyma Chamberlin, 1943, Bull Univ. Utah, 34(7): 65. Type species: *A. atopa* Chamberlin, by original designation. Synonymized by Shear, 1977.

Orthyma Chamberlin, 1943, Bull. Univ. Utah, 34(7): 66. Type species: *O. clara* Chamberlin [=*Myrmecodesmus chamberlini* Shear, 1977], by original designation. Synonymized by Shear, 1977.

Eirenyma Chamberlin, 1943, Bull. Univ. Utah, 34(7): 67. Type species: *E. munda* Chamberlin, by original designation. Synonymized by Shear, 1977.

Telauxus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 68. Type species: *T. fractus* Chamberlin, by original designation. Synonymized by Shear, 1977.

Melastolus Loomis, 1966, Journ. Kansas Entom. Soc., 59: 520. Type species: *Styraxodesmus chipinqueus* Chamberlin, 1943, by original designation. Synonymized by Shear, 1977.

Gibberdesmus Causey, 1971, Bull. Assoc. Mexican Cave Stud., 4: 23. Type species: *G. egenus* Causey, by original designation. Synonymized by Shear, 1977.

Stenotodesmus Causey, 1971. Bull. Assoc. Mexican Cave Stud., 4: 28. Type species: *S. amarus* Causey, by original designation. Synonymized by Shear, 1977.

28 species, Mexico.

Myrmecodesmus aconus (Shear)

Ilyma acona Shear, 1973, Acc. Naz. Lincei Prob. Att. Sci. Cult. 171 (2): 296, figs. 101-104. ♂ HT (MCZ) from Cueva de Coatepec, Coatepec-Harinas, Edo. Mexico, Mexico.

Myrmecodesmus aconus: Shear, 1977, Acc. Naz. Lincei Prob.Att. Sci. Cult., 171 (3): 256.

Myrmecodesmus amaurus (Causey)

Stenotodesmus amaurus Causey, 1971, Bull. Assoc. Mexican Cave Stud., 4: 28, figs. 16, 17. ♂ HT (?USNM) from Sotano de Tlamaya, five km north of Xilitla, San Luis Potosí, Mexico.

Myrmecodesmus amaurus: Shear, 1977, Acc. Naz. Lincei Prob. Att. Sci. Cult., 171(3): 256.

Myrmecodesmus amplus (Causey)

Gibberdesmus amplus Causey, 1973, Bull. Assoc. Mexican Cave Stud., 5: 119, figs. 24-26. ♂ HT (USNM) from Cueva del Guano, 10 km northeast of Valle Nacional, Oaxaca, Mexico.

Myrmecodesmus amplus: Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cxult., 171(3): 256.

Range: Caves in the vicinity of Valle Nacional, Oaxaca.

Myrmecodesmus analogous (Causey)

Gibberdesmus analogous: Causey, 1971, Bull. Assoc. Mexican Cave Stud., 4: 27, figs. 12, 13. ♂ HT (?USNM) from Pinal de Amoles, Queretaro, Mexico.

Myrmecodesmus analogous: Shear, 1977, Acc. Naz. Lincei Prob. Att. Sci. Cult. 171(3): 255.

Myrmecodesmus atopus (Chamberlin)

Apysma atopa Chamberlin, 1943, Bull. Univ. Utah, 34(7): 65, fig. 159. ♂ HT (USNM) from San Rafael,2700-3000 m., Edo. Mexico, Mexico.

Myrmecodesmus atopus: Shear, 1977, Acc. Naz. Lincei Prob. Att. Sci. Cult., 171(3): 255.

Myrmecodesmus brevis Shear

Myrmecodesmus brevis Shear, 1977, Acc, Naz. Lincei Prob. Att. Sci. Cult. 171(3): 257, figs. 35-37. ♂ HT (AMNH) from Rio Frio cave A, Augustine, Belize.

Myrmecodesmus chamberlini Shear

Orthyma clara Chamberlin, 1943, Bull. Univ. Utah, 34(7): 66, fig. 165.. ♀ HT (USNM) from Fortin de las Flores, Veracruz, Mexico. A secondary junior homonym of *Ceratesmus clarus* Chamberlin, 1942, when both were transferred into *Myrmecodesmus.*

Myrmecodesmus chamberlini Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult. 171(2): 255.

Myrmecodesmus chipinqueus (Chamberlin)

Styraxodesmus chipinqueus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 68, figs. 166-167. ♀ HT (USNM) from Chipinque Mesa, Monterey, Nuevo León, Mexico. – Shear, 1973, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(2): 292, figs. 92-94.

Melastolus chipinqueus: Loomis, 1966, Journ. Kansas Entom. Soc., 59: 520.

Myrmecodesmus chipinqueus: Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(3): 254.

Myrmecodesmus clarus (Chamberlin)

Ceratesmus clarus Chamberlin, 1942, Bull. Univ. Utah, 33(4): 10, figs. 11-13. ♀ HT (USNM) from Gruta de Atoyac, Veracruz, Mexico. Synonymized by Shear, 1977.

Myrmecodesmus colotlipa (Chamberlin)

Ilyma colotlipa Chamberlin, 1942, Bull. Univ. Utah, 33(4): 9. ♀ HT (USNM) from Cueva de Jutxlahuaca, Colotlipa, Guerrero, Mexico.

Myrmecodesmus colotlipa: Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(3): 254.

Myrmecodesmus cornutus (Shear)

Ilyma cornuta Shear, 1973, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(2): 294, figs. 98-100. ♂ HT (AMNH) from Cueva Naciemento del Rio Frio, Goméz Farias, Tamaulipas, Mexico.

Myrmecodesmus cornutus: Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult. 171(3): 256.

Myrmecodesmus egenus (Causey)

Gibberdesmus egenus Causey, 1971, Bull. Assoc. Mexican Cave Stud., 4: 25, figs. 2-8. ♂ HT (USNM) from Cueva de la Mina, seven km northwest of Goméz Farias, Tamaulipas, Mexico.

Myrmecodesmus egenus: Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(3): 255.

Myrmecodesmus digitatus (Loomis), new combination!

Ilyma digitata Loomis, 1959, Journ. Washington Acad. Sci., 49: 160, figs. 6, 7. ♂ HT (USNM) from a site beside US Hy. 190, between Kinder and LeBlanc, Allen Par., Louisiana.

Range: Louisiana eastward along the Gulf coast as far as Calhoun Co., Florida (VMNH, Loomis det.)

Myrmecodesmus errabundus (Shear)

Bolivaresmus errabundus Shear, 1973, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(2): 301, figs. 121-127. ♂ HT (AMNH) from Cueva Naciemento del Rio Frio, Goméz Farias, Tamaulipas, Mexico.

Myrmecodesmus errabundus: Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult. 171(3): 255.

Myrmecodesmus gelidus (Causey), new combination!

Gibberdesmus gelidus Causey, 1971, Bull. Ass. Mexican Cave Stud., 4: 25, figs. 9. ♂ HT (USNM?) from Cueva Naciemento del Rio Frio, seven km northwest of Goméz Farias, Tamaulipas, Mexico.

Myrmecodesmus formicarius Silvestri

Myrmecodesmus formicarius Silvestri, 1910, Zool. Anz., 35: 360, fig. 5. ♂ HT (LEAP) from Jalapa [= Xalapa], Veracruz, Mexico. – Hoffman, 1973, Proc. Biol Soc. Washington, 86: 513, figs. 1, 2.

Ilyma cajuni Loomis, 1944, Psyche, 51: 175, figs. 6a-b. ♂ HT (MCZ) from Venice, Plaquemines Par., Louisiana. Synonymized by Hoffman, 1973.

Range: From Vera Cruz north and east through the Texas coastal plain as far as Louisiana (perhaps some populations introduced?).

Myrmecodesmus fractus (Chamberlin)

Telauxus fractus Chamberlin, 1943, Bull. Univ. Utah, 34(7): 68, figs. 168, 169. ♀ HT (USNM) from Fortin de las Flores, Veracruz, Mexico.

Myrmecodesmus fractus: Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(3): 255.

Myrmecodesmus ilymoides (Shear)

Gibberdesmus ilymoides Shear, 1973, Acc. Naz. Lincei, Prob. Att. Sci. Cult. 171(2): 297, figs. 105-110. ♂ HT (AMNH) from Gruta de San Bartolo, ten miles southwest of Monterrey, Nuevo León, Mexico.

Myrmecodesmus ilymoides: Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(3): 256.

Myrmecodesmus inornatus Shear

Myrmecodesmus inornatus Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(3): 259, fig. 31. ♂ HT (AMNH) from Grutas de Llano Grande, Huixtla, Chiapas, Mexico.

Myrmecodesmus monasticus (Causey)

Bolivaresmus monasticus Causey, 1971, Bull. Soc. Mexican Cave Stud., 4: 24, fig. 1. ♂ HT (USNM) from Cueva de Llanura, three km west of Los Micos, San Luis Potosí, Mexico.

Myrmecodesmus monasticus: Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult. 171(3): 255.

Myrmecodesmus modestus Silvestri

Myrmecodesmus modestus Silvestri, 1911, Boll. Lab. zool. Portici, 5: 194, fig. XVII, 1-2. ♀ HT (LEAP) from Jalapa (Xalapa) Veracruz, Mexico.

Myrmecodesmus morelus (Chamberlin)

Ilyma morela Chamberlin, 1942, Bull. Univ. Utah, 34(7): 63, figs. 154-156. ♂ HT (USNM) from Parque Nacional de Zempoala, Morelos, Mexico.

Myrmecodesmus morela: Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult. 171(3): 254.

Myrmecodesmus mundus (Chamberlin)

Eirenyma munda Chamberlin, 1943, Bull. Univ. Utah, 34(7): 67, figs. 162-164. ♂ HT (USNM) from Cuidad Vera Cruz, Vera Cruz, Mexico.

Myrmecodesmus mundus: Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(3): 255.

Myrmecodesmus obscurus (Causey)

Gibberdesmus obscurus Causey, 1971, Bull. Assoc. Mexican Cave Stud., 4: 27, fig. 10. ♀ HT (USNM) from San Miguel, 16 km west of Aquismón, San Luis Potosí, Mexico.

Myrmecodesmus obscurus: Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(3) 256.

Myrmecodesmus orizaba (Chamberlin)

Ilyma orizaba Chamberlin, 1942, Bull. Univ. Utah, 31(11): 24. ♀ HT (USNM) from Orizaba, Veracruz, Mexico.

Myrmecodesmus orizaba: Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(3): 254.

Myrmecodesmus potosinus (Shear)

Bolivaresmus potosinus: Shear, 1973, Acc. Naz. Lincei, Prob. Att. Sci. Cult. 171(2): 300, figs. 111-117. ♂ HT (AMNH) from Cueva de la Perra, three miles north of Xilitla, San Luis Potosí, Mexico.

Myrmecodesmus potosinus: Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(3): 300.

Myrmecodesmus sabinus (Chamberlin)

Bolivaresmus sabinus Chamberlin, 1942, Bull. Univ. Utah, 33(4): 10, figs. 14-17. ♂ HT (USNM) from Cueva de los Sabinos, 12.5 km northeast of Valles, San Luis Potosí, Mexico. – Shear, 1973, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(2): 301, figs. 118-120.

Myrmecodesmus sabinus: Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult. 171(3): 255.

Myrmecodesmus unicorn Shear

Myrmecodesmus unicorn Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(3): 257, figs. 32, 33. ♂ HT (AMNH) from St. Herman Cave, Caves Branch, Belize.

Genus **Peckfiskia** Loomis

Peckfiskia Loomis, 1969, Florida Entom., 52: 142. Type species: *P. cavernicola* Loomis, by original designation.

One species, Jamaica.

Peckfiskia cavernicola Loomis

Peckfiskia cavernicola Loomis, 1969, Florida Entom., 52: 142, figs. 3-6. ♂ HT (FSCA) from Coffe River Cave, 1.5 miles north of Oxford, Auchtembedde, Manchester Par., Jamaica.

Genus **Penteporus** Loomis

Penteporus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 180. Type species: *P. crenellatus* Loomis, by original designation.

One species, Hispaniola.

Penteporus crenellatus Loomis

Penteporus crenellatus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 181, figs. 74a-c. ♀ HT (USNM) from Fond des Negre, Haiti.

Genus **Poratia** Cook & Cook

Poratia Cook & Cook, 1894, Ann. New York Acad. Sci., 8: 238. Type species: *Scytonotus digitatus* Porat, 1889, by original designation.

Dominicodesmus Chamberlin, 1923, Proc. Biol. Soc. Washington, 36: 189. Type species: *D. geophilus* Chamberlin, by original designation. Synonymized with *Psochodesmus* by Loomis, 1934.

Tidopterus Chamberlin, 1923, Zoologica (New York), 3: 420. Type species: *T. sequens* Chamberlin, by original designation. Synonymized by Loomis, 1934.

Two (?) species, widespread in the Neotropical Region.

This genus is customarily listed also for the East Indies, but I believe solely on the basis of Silvestri's relegation of *Poratia heterotuberculata* (Carl, 1902) to the synonymy of *digitata* in 1925. Carl's species was based on a series of females from "Java", and the description itemized a number of important differences from *digitata* in tergal ornamentation. Until genuine males of *heterotuberculata* are known, I think that placing it under Porat's name is very premature and unjustifiable.

Poratia digitata (Porat)

Scytonotus digitatus Porat, 1889, Entom. Tidskr., 10: 59. HT ?♀ (Mus. Göteborg) from a greenhouse in Göteborg, Sweden.

Poratia digitata: Cook & Cook, 1894, Ann. New York Acad. Sci., 8: 238. – Silvestri, 1925, Bol. Real Soc. Española, 23: 375, figs. III, 1-9, IV, 1-9.

Dominicodesmus panamicus Chamberlin, 1940, Bull. Univ. Utah, 30(2): 6. HT (USNM) from Barro Colorado Island, Canal Zone, Panama.

Range: Widespread in the tropics, dispersed by agricommerce; Panama, Costa Rica.

Poratia fossata Loomis

Poratia fossata Loomis, 1964, Fieldiana: Zool., 47: 74, figs. 6, R-U. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panama.

Poratia granulofrons (Chamberlin)

Treseolobus granulofrons Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 221. ♀ PT (MCZ) from Jacmel, Haiti.

Doninicodesmus geophilus Chamberlin, 1923, Proc. Biol. Soc. Washington, 36: 189. HT (MCZ) from plants originating in the Republica Dominicana. Synonymized by Loomis, 1934.

Psochodesmus granulofrons: Loomis, 1934, Smithsonian Misc. Coll.89(14): 55.

Range: Haiti; Panama?

Genus **Poratioides** Loomis

Poratioides Loomis, 1970, Florida Entom., 53: 131. Type species: *P. virginalis* Loomis, by original designation.

Two species, U. S. Virgin Islands, southern Florida.

Poratioides disparatus Loomis

Poratioides disparatus Loomis, 1973, Florida Entom, 56: 322. ♂ HT (FSCA) from the Loomis residence at 5355 SW 92nd St., Miami, Dade Co., Florida.

Poratioides virginalis Loomis

Poratioides virginalis Loomis, 1970, Florida Entom., 53: 132, figs. 2, 3. ♀ HT (USNM) from Hawksnest Bay, St. John, U. S. Virgin Islands.

Genus **Psochodesmus** Cook

Psochodesmus Cook, 1896, Brandtia, 5: 25. Type species: *P. crescentis* Cook, by monotypy.

One (two?) species, Florida.

Psochodesmus crescentis Cook

Psochodesmus crescentis Cook, 1896, Brandtia, 5: 25. ♂ HT (USNM) from Crescent City, Putnam Co., Florida. – Loomis, 1934, Smithsonian Misc. Coll. 89(14): 54, figs. 27a,b.

Range: Southern two-thirds of the Florida Peninsula.

Genus **Rettenmeyeria** Loomis

Rettenmeyeria Loomis, 1959, Journ. Kansas Entom. Soc., 32: 6. Type species: *R. parvipes* Loomis, by original designation.

Two species, Panama, Belize.

Rettenmeyeria cryptymoides Shear

Rettenmeyeria cryptymoides Shear, 1977, Acc. Naz. Lincei, Prob. Att. Sci. Cult., 171(3): 260. ♂ HT (AMNH) from Rio Frio Cave A, St. Augustine, Belize.

Rettenmeyeria parvipes Loomis

Rettenmeyeria parvipes Loomis, 1959, Journ. Kansas Entom. Soc., 32: 6, figs. 11-16. ♂ HT (USNM) from Barro Colorado Island, Canal Zone, Panama.

Genus **Sarolepis** Loomis

Sarolepis Loomis, 1964, Fieldiana:Zool., 47: 75. Type species: *S. spiculatus* Loomis, by original designation.

One species, Panama.

Sarolepis spiculatus Loomis

Sarolepis spiculatus Loomis, 1964, Fieldiana: Zool., 47: 76, figs. 7, A-F. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panama.

Genus **Styraxodesmus** Chamberlin

Styraxodesmus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 222. Type species: *S. furcatus* Chamberlin, by original designation.

Three (?) species, Puerto Rico, Haiti.

Removed from genus: *Styraxodesmus cubensis* Chamberlin, 1947 (see *Heteropente*); *Styraxodesmus chipinqueus* Chamberlin, 1943 (see *Myrmecodesmus).*

Styraxodesmus ater Loomis

Styraxodesmus ater Loomis, 1936, Bull. Mus. Comp. Zool., 80: 188, pl. 3, fig. 9. ♂ HT (USNM) from the Île de Cabrit, near Bayeux, Haiti.

Range: Loomis (1936) cited a number of Haitian localities.

Styraxodesmus furcatus Chamberlin

Styraxodesmus furcatus Chamberlin, 1918, Bull. Mus. Comp. Zool., 62: 222. ♀ HT (MCZ) from Jacmel, Haiti.

Styraxodesmus juliogarciai Velez

Styraxodesmus juliogarciai Velez, 1967, Caribbean Journ. Sci., 7: 29, figs. 10, 11. ♂ HT (USNM) from La Mina, 2000 ft., on El Yunque, Puerto Rico.

Genus **Synoptura** Attems

Synoptura Attems, 1914, Arch. Naturg. 80(A4): 174, 179. Type species: *Lophodesmus laminatus* Pocock, 1909, by original designation; 1938, Das Tierreich, 70: 307.– Hoffman, 1976, Rev. suisse Zool., 83: 314.

One species, Mexico.

Attems' concept of the genus included also *Lophodesmus perparvus* and *L. celatus* of Pocock.

Synoptura laminata (Pocock)

Lophodesmus laminatus Pocock, 1909, Biol. Centr.-Amer., Diplop., 132, pl. X, figs. 1-1g. ♂ HT (BMNH) from Teapa, Tabasco, Mexico.

Synoptura laminata: Attems, 1914, Arch. Naturg. 80(A4): 179. – Hoffman, 1976, Rev. suisse Zool., 83: 316, fig. 6.

Range: Known from the type locality and eastern Chiapas, Mexico.

Genus **Tracheloaspis** Loomis

Tracheloaspis Loomis, 1961, Proc. U. S. Nat. Mus., 113: 98. Type species: *T. tumida* Loomis, by original designation.

One species, Panama.

Tracheloaspis tumida Loomis

Tracheloaspis tumida Loomis, 1961, Proc. U. S. Nat. Mus., 113: 99, figs. 4b-e. ♂ HT (USNM) from Barro Colorado Island, Canal Zone, Panama.

Range: Recorded also from Almirante, Prov. Bocas del Toro, Panama.

Genus **Tridesmus** Cook

Tridesmus Cook, 1896, Brandtia, 5: 21. Type species: *T. sectilis* Cook, by original designation.

Three species, Puerto Rico.

Tridesmus guilarteus Chamberlin

Tridesmus guilarteus Chamberlin, 1950, Proc. Biol. Soc. Washington, 63: 148. ♀ HT (USNM) from Villa de Guilarte [presumably near Monte Guilarte, west of Adjuntas], Puerto Rico.

Tridesmus portoricensis Silvestri

Tridesmus portoricensis Silvestri, 1908, Bull. American Mus. Nat. Hist., 24: 577, fig. XII, 1-3. ♂ HT (?AMNH) from Utuado, Puerto Rico.

Tridesmus sectilis Cook

Tridesmus sectilis Cook, 1896, Brandtia, 5: 21. ♂ HT (ZMB) from "Portorico" without further locality.

Genus **Xenoporus** Loomis

Xenoporus Loomis, 1961, Proc. U. S. Nat. Mus., 113: 100. Type species: *X. carinaceps* Loomis, by original designation.

One species, Panama.

Xenoporus carinaceps Loomis

Xenoporus carinaceps Loomis, 1961, Proc. U. S. Nat. Mus., 113: 101, figs. 4f-g, 5a. ♂ HT (USNM) from El Valle, Prov. Cocle, Panama.

Range: Recorded also from Almirante, Prov. Bocas del Toro, Panama.

PYRGODESMIDAE OF UNCERTAIN STATUS OR POSITION

(In reality, half the names in the foregoing list could be justifiably be entered under this heading)

Gasatomus dubius Chamberlin, 1940, Bull. Univ. Utah, 30(9): 5. Imm. ST (USNM) from Barro Colorado Island, Canal Zone, Panama.

Loomis (1964) suspected that this name was based on one of the four species of *Calymmodesmus* known from Barro Colorado, but despaired of ever associating the appropriately named *dubius* with any of them. The type species of *Gasatomus* is known from Guyana; the genus is here striken from the list of Mesamerican millipeds.

Stylodesmus sanantoni Velez, 1967, Caribbean Journ. Sci., 7: 30, fig. 12. ♀ HT (USNM) from eight km east of San Sebastian, Puerto Rico.

Congenericity of this species with *S. horridus* (Liberia) seems entirely implausible.

Family Cyrtodesmidae Cook

Cyrtodesmidae Cook, 1896, Brandtia, 2: 7; 1898, Proc. U. S. Nat. Mus., 21: 457. – Hoffman, 1980, Classification of the Diplopoda, p. 183.

Three genera, Costa Rica to Trinidad and Peru.

Genus **Cyrtodesmus** Gervais

Cyrtodesmus Gervais, 1847, in Walckenaer & Gervais, Hist. natur. Insectes Apteres, 4: 92. Type species: *Polydesmus velutinus* Gervais & Goudot, 1844, by subsequent designation of Silvestri, 1896. – Loomis, 1964, Fieldiana: Zool., 35 (discussion; description of *C. velutinus*; key to Panamanian species).

[Loomis' allocation of the names *Oncodesmus* Cook and *Cyliocrytus* Cook as junior synonyms of *Cyrtodesmus* was not based on adequate knowledge of the two respective type species, and they are reinstated (even if as *nomina dubia*) until more substantial information about their characters is forthcoming].

Trigonostylus Brolemann, 1898, Ann. Soc. entom. France, 67: 273. Type species: *T. spinosus* Brolemann, 1898, by subsequent designation of Attems, 1914. Synonymized with *Cyliocyrtus* by Loomis, 1937, and both in turn with *Cyrtodesmus* by Loomis, 1964.

Peltedo Chamberlin, 1940, Bull. Univ. Utah, 30(9): 8. Type species: *P. archimedes* Chamberlin, by original designation. Synonymized by Loomis, 1964.

Oncodesmoides Kraus, 1954, Senckenb. biol. 35: 41. Type species: *O. rectus* Kraus, by original designation. Synonymized by Loomis, 1964.

About 25 species, Costa Rica to Peru and Trinidad.

Cyrtodesmus archimedes (Chamberlin)

Peltedo archimedes Chamberlin, 1940, Bull. Univ. Utah, 30(9): 8. Imm. ? HT (USNM) from Barro Colorado Island, Canal Zone, Panama.

Cyrtodesmus archimedes: Loomis, 1964, Fieldiana; Zool., 47: 37.

Oncodesmoides angulatus Loomis, 1961, Proc. U. S. Nat. Mus., 113: 87. Figs. 2b. ♂ HT (USNM) from the Piña area, Canal Zone, Panama. Synonymized by Loomis, 1964.

Range: Recorded by Loomis from several Panamanian provinces west of the Canal Zone.

Cyrtodesmus bifurcus Loomis

Cyrtodesmus bifurcus Loomis, 1964, Fieldiana: Zool., 47: 38, figs. 3, F-I. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panama.

Cyrtodesmus confluentus Loomis

Cyrtodesmus confluentus Loomis, 1964, Fieldiana: Zool., 47: 40, figss. 3, J-N. ♂ HT (USNM) from Distr. Changuinola, Prov. Bocas del Toro, Panama.

Cyrtodesmus coronatus Loomis

Cyrtodesmsus coronatus Loomis, 1964, Fieldiana: Zool., 47: 42, figs. 3, P.-Q. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panama.

Cyrtodesmus dentatus Loomis

Cyrtodesmus dentatus Loomis, 1964, Fieldiana: Zool., 47: 43, figs. 3, R-U. ♂ HT (FMNH) from Finca Lerida, near Boquete, Prov. Chiriquí, Panama.

Range: Chiriquí and Bocas del Toro provinces, western Panama.

Cyrtodesmus depilis Loomis

Cyrtodesmus depilis Loomis, 1964, Fieldiana: Zool., 47: 44, figs. 4, A-D. ♂ HT (FMNH) from Finca Lerida, near Boquete, Prov. Chiriquí, Panama.

Cyrtodesmus depressus Loomis

Cyrtodesmus depressus Loomis, 1974, Florida Entom., 57: 174, fig. 7. ♂ HT (FSCA) from Finca Las Cruces, near San Vito, Prov. Puntarenas, Costa Rica.

Cyrtodesmus hispidulosus Loomis

Cyrtodesmus hispidulosus Loomis, 1964, Fieldiana: Zool., 47: 46, figs. 4, E-H. ♂ HT (FMNH) from Finca Palo Santo, near Nueva California, Prov. Chiriquí, Panama.

Cyrtodesmus humerosus Loomis

Cyrtodesmus humerosus Loomis, 1974, Florida Entom., 57: 175, figs. 9, 10. ♂ HT (FSCA) from north side Cerro de la Muerte, Prov. San Jose-Cartago, Costa Rica.

Cyrtodesmus laticaudatus Loomis

Cyrtodesmus laticaudatus Loomis, 1972, Florida Entom., 55: 197, figs. 17, 18. ♂ HT (USNM) from Cerro Azul, Prov. Panama, Panama.

Cyrtodesmus lobatus Loomis

Cyrtodesmus lobatus Loomis, 1974, Florida Entom., 57: 176, fig. 12. ♀ HT (FSCA) from Finca Las Cruces, near San Vito, Prov. Puntarenas, Costa Rica.

Cyrtodesmus lyrapes Loomis

Cyrtodesmus lyrapes Loomis, 1964, Fieldiana: Zool., 47: 47, fig. 4, I. ♂ HT (FMNH) from Almirante, Prov. Bocas del Toro, Panama.

Cyrtodesmus macrosetosus Loomis

Cyrtodesmus macrosetosus Loomis, 1964, Fieldiana: Zool., 47: 48, fig. 4, J-N. ♂ HT (FMNH) from Finca Lerida, near Boquete, Prov. Chiriquí, Panama.

Cyrtodesmus mundus Loomis

Cyrtodesus mundus Loomis, 1964, Fieldiana: Zool., 47: 49, figs. 4, O-U. ♂ HT (FMNH) from Finca Lerida, near Boquete, Prov. Chiriquí, Panama.

Cyrtodesmus palliatus Loomis

Cyrtodesmus palliatus Loomis, 1972, Florida Entom., 55: 198, figs. 19, 20.) HT (USNM) from Cairo, Prov. Limon, Costa Rica.

Cyrtodesmus quadridens Loomis

Cyrtodesmus quadridens Loomis, 1972, Florida Entom., 55: 199, fig. 22. ♂ HT (USNM) from Cairo, Prov. Limon, Costa Rica.

CYRTODESMIDAE OF UNCERTAIN GENERIC POSITION

Cyrtodesmus bicolor Loomis

Cyrtodesmus bicolor Loomis, 1964, Fieldiana: Zool., 47: 37, figs. 3, B-E. ♀ HT (FMNH) from west of Finca Palo Santo, near Neuva California, Prov. Chiriquí, Panama.

The scarcely enlarged paranota of the second body segment suggest generic status for this species, if commensurate differences are found in male genitalia.

Family Oniscodesmidae DeSaussure

Oniscodesmides DeSaussure, 1860, Mém. Soc. Phys. Hist. nat. Genève, 15: 272.

Oniscodesmidae Cook, 1896, Brandtia, 5: 28; 1898, Proc. U. S. Nat. Mus., 21: 453. – Hoffman, 1980, Classification of the Diplopoda, p. 183.

Crypturodesmidae Silvestri, 1897, Boll. Mus. Zool. Anat. comp. Univ. Torino, 12(277): 1.

Eight genera, Mexico to Brazil and Argentina. Placement of *Ligiodesmus* in this family requires confirmation.

Genus **Barrodesmus** Chamberlin

Barrodesmus Chamberlin, 1940, Bull. Univ. Utah, 30(9): 7. Type species: *B. isolatus* Chamberlin, by original designation.

One species, Panama.

As the genus was based upon a very inadequately described type species, Loomis (1964) was unable to associate the name with anything he knew from Barro Colorado Island, and it is here entered as a valid taxon solely by default.

Barrodesmus isolatus Chamberlin

Barrodesmus isolatus Chamberlin, Bull. Univ. Utah, 30(9): 7. HT/ST? (USNM) from Barro Colorado Island, Canal Zone, Panama.

Genus **Ligiodesmus** Pocock

Ligiodesmus Pocock, 1909, Biol. Centr.-Amer., Diplopoda, p. 111. Type species: *L. pusillus* Pocock, by original designation.

Monobasic, southern Mexico (disjunct from the main area of the family).

Ligiodesmus pusillus Pocock

Ligiodesmus pusillus Pocock, 1909, Biol. Centr.-Amer., Diplop., p. 111, pl. VIII, figs. 6a-e. HT (?BMNH) from Teapa, Tabasco, Mexico.

Genus **Lignydesmus** Cook

Lignydesmus Cook, 1896, Brandtia 5: 28. Type species: *Oniscodesmus rubriceps* Peters, 1864, by original designation. – Loomis, 1964, Fieldiana: Zool., 47: 56.

Mesesmus Chamberlin, 1941, Pomona Coll. Journ. Entom. Zool., 33: 57. Type species: *M. insulanus* Chamberlin, by original designation. Synonymized by Loomis, 1964.

Panamadesmus Loomis, 1961, Proc. U. S. Nat. Mus. 113: 89. Type species: *P. sculptilis* Loomis, by original designation. Synonymized by Loomis, 1964.

Huanucodesmus Loomis, 1961, Proc. U. S. Nat. Mus. 113: 91. Type species: *Detodesmus tingonus* Chamberlin, 1955, by original designation. Synonymized by Loomis, 1964.

Nine species, Panama to Peru.

Lignydesmus eutypus (Chamberlin)

Oniscodesmus eutypus Chamberlin, 1940, Bull. Univ. Utah, 30(9): 7. HT (USNM) from Barro Colorado Island, Canal Zone, Panama.

Mesesmus eutypus: Chamberlin, 1941, Pomona Coll. Journ. Entom. Zool., 33: 57, figs.

Lignydesmus eutypus: Loomis, 1964, Fieldiana: Zool., 47: 57.

Lignydesmus insulanus (Chamberlin)

Mesesmus insulanus Chamberlin, 1941, Pomona Coll. Journ. Entom. Zool., 33: 57. fig. 1. ♂ HT (USNM) from Barro Colorado Island, Canal Zone, Panama.

Lignydesmus insulanus: Loomis, 1964, Fieldiana: Zool., 47: 57.

Lignydesmus panamanus Loomis

Lignydesmus panamanus Loomis, 1961, Proc. U. S. Nat. Mus., 113: 88, figs. 2c-d. ♀ HT (USNM) from Almirante, Prov. Bocas del Toro, Panama.

Lignydesmus projectus Loomis

Lignydesmus projectus Loomis, 1964, Fieldiana: Zool., 47: 57, figs. 5, F-K. ♂ HT (FMNH) from Finca Lerida, near Boquete, Prov. Chiriquí, Panama.

Lignydesmus sculptilis (Loomis)

Panamadesmus sculptilis Loomis, 1961, Proc. U. S. Nat. Mus., 113: 90, figs. 2e-i. ♂ HT (USNM) from the Piña area, Canal Zone, Panama.

Family Dorsoporidae Loomis

Dorsoporidae Loomis, 1958, Journ. Washington Acad. Sci., 48: 237.

One genus, Panama.

Genus **Dorsoporus** Loomis

Dorsoporus Loomis, 1958, Journ. Washington Acad. Sci., 48: 237. Type species: *D. barroensis* Loomis, by original designation.

One species, Panama.

Dorsoporus barroensis Loomis

Dorsoporus barroensis Loomis, 1958, Journ. Washington Acad. Sci., 48: 137, figs. 1-4. ♀ HT (USNM) from Barro Colorado Island, Canal Zone, Panama..

Polydesmida of uncertain family position or status

Genus **Dasyodontus** Loomis

Dasyodontus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 156. Type species: *D. hispaniolus* Loomis, by original designation.

One species: Haiti.

Dasyodontus hispaniolus Loomis

Dasyodontus hispaniolus Loomis, 1936, Bull. Mus. Comp. Zool., 80: 158, figs. 68a, b. ♂ HT (USNM) from Le Borgne, Haiti.

Genus **Eoromus** Cook & Loomis

Eoromus Cook & Loomis, in: Loomis, 1936, Bull. Mus. Comp. Zool., 80: 175. Type species: *E. aberrans* Cook & Loomis, by original designation.

One species: Haiti.

From the moment of its publication, this genus, and the family based upon it, has remained of uncertain position. Its authors considered possible affinity with the Pyrgodesmidae, without much conviction. With no better insights, I placed Eoromidae as a synonym of Pyrgodesmidae in 1980, and listed *Eoromus* in the alphabetical roster of pyrgodesmid genera.

However, with subsequent knowledge of unusual Neotropical chelodesmoids, I have come to suspect that *Eoromus*, despite its minute size and geographic isolation, may have close affinities with the Andean tribe Batodesmini. This is suggested by the form of both the collum and epiproct, although the reduced gonopods would seem to exclude the genus from the Batodesmini. A very careful re-examination of the single known male of *E. aberrans,* or of topotypic material, could quickly confirm or refute this proposed allocation.

Eoromus aberrans Cook & Loomis

Eoromus aberrans Cook & Loomis, in: Loomis, 1936, Bull. Mus. Comp. Zool. 80: 176, figs. 73a-g, Pl. 3, figs. 5, 6. ♂ HT (USNM) from ". . .the base of a limestone cliff, south of the divide near Trouin, on the road to Jacmel. . ." Haiti. It is unknown if this crucial site has escaped the deforestation that has swept Haiti since 1928.

Genus **Eudiporus** Silvestri

Eudiporus Silvestri, 1929, Boll. Lab. Zool. Portici, 23: 7. Type species: *E. bruneri* Silvestri, by original designation.

One species, Puerto Rico.

Eudiporus bruneri Silvestri

Eudiporus Bruneri Silvestri, 1929, Boll. Lab. Zool. Portici, 23: 9, figs. I, 11-4, II, 1-11. 2 ♀ ST (LEAP) from Bellamar caverns, Prov. Matanzas, Cuba.

Genus **Hystrichodesmus** Loomis

Hystrichodesmus Loomis, 1938, Bull. Mus. Comp. Zool., 82: 477. Type species: *H. cubensis* Loomis, by original designation.

One species, Cuba.

The genus was originally proposed in the Comodesmidae. Later, Loomis (MSS notes) thought it should be transferred to the Trichopolydesmidae, then used to denote the taxon now called Fuhrmannodesmidae. While that may be correct, the notably small gonopod coxa, as shown in Loomis's figure 27f for *H.cubensis*, seems discordant against other fuhrmannodesmid genera. Adequate placement of this genus seems contingent upon a careful re-examination of a male specimen.

Hystrichodesmus cubensis Loomis

Hystrichodesmus cubensis Loomis, 1938, Bull. Mus. Comp. Zool., 82: 478, figs. 27a-f. ♂ HT (MCZ) from Pico Turquino, Prov. Granma or Santiago de Cuba, Cuba.

Genus **Inodesmus** Cook

Inodesmus Cook, 1896, Brandtia, 5: 25. Type species: *I. jamaicensis* Cook, by monotypy.

?*Inodesmus* Loomis, 1969, Florida Entom., 52: 144. – Jeekel, 1986, Beaufortia, 36: 46.

?*Atopogonus* Carl, 1926, Nova Caledonia, Zool., 4: 386. Type species: *A. baccatus* Carl, by original designation.

Three (?four) species, Jamaica, New Caledonia, Queensland.

This small taxon poses an intriguing and very difficult problem. Cook's original description is barely enough to validate the species' name and his type material has never been recovered. When H. F. Loomis received material that concurred with the "description", and which was also taken from a Jamaican cave, it was understandable that he would assume conspecificity with *I. jamaicensis.* His redescription (1975) included a drawing of the gonopod, in which Jeekel soon afterwards saw striking similarity with that of *Atopogonus baccatus*, described by Carl from New Caldedonia, and a congeneric new species which he had collected in Queensland. If Loomis's Jamaican material could be proven to be *jamaicensis,* there is little doubt that *Atopogonus* must fall as a junior synonym of *Inodesmus.*

Jeekel took the conservative position, that the foregoing association was still only circumstantial, and preferred to retain the well-described *Atopogonus* for the two species from New Caledonia and Queensland, while admitted that both were congeneric with whatever species Loomis had described, and holding *Inodesmus jamaicensis* in abeyance. I think that a logical extension of this reasoning would have compelled the proposal of a new name for the Loomis species.

Although the body form of this genus clearly suggests allocation to the Haplodesmidae, as formalized by Jeekel, the gonopods present a singular and highly disjunct pattern that invites taxonomic recognition at a level no less than subfamily (or family). I do not wish to muddy this water any more than it is, and suggest than no arbitrary placements be proposed until an adequate comparative study can be made. In this connection, it should not be overlooked that the family name Comodesmidae (Cook, 1896) may well cover the same taxonomic concept as does Haplodesmidae.

The biogeographic implications are equally perplexing. The only similar cases known to me in the Diplopoda, of taxa having species in the Australian region and the West Indies, are the genus *Spirobolellus* and the genus-pair *Rhinocricus* and *Acladocricus*. However, in both instances the taxa are locally quite speciose and widespread, but neither is currently represented on Jamaica. Jeekel's suggestion that the Jamaican form might have been introduced is plausible, but diminished by the fact that I have seen material of an additional - still undescribed - species from the rain forests in the Blue Mountains of Jamaica. While a multiple transport of rare and localized species from the Antipodes to a single West Indian island is not impossible, it does appear improbable. How else, then, can this distribution be accounted? If natural, it can only represent an astonishing case of reliction of a formerly widespread parental lineage.

Inodesmus jamaicensis Cook

Inodesmus jamaicensis Cook, 1896, Brandtia, 5: 25. Location of type material unknown, from an unspecified cave in Jamaica.

? Inodesmus jamaicensis: Loomis, 1969, Florida Entom., 52: 144, fig. 7.

Range: Recorded by Loomis from two caves in Trelawney Par., Jamaica, on circumstantial identification.

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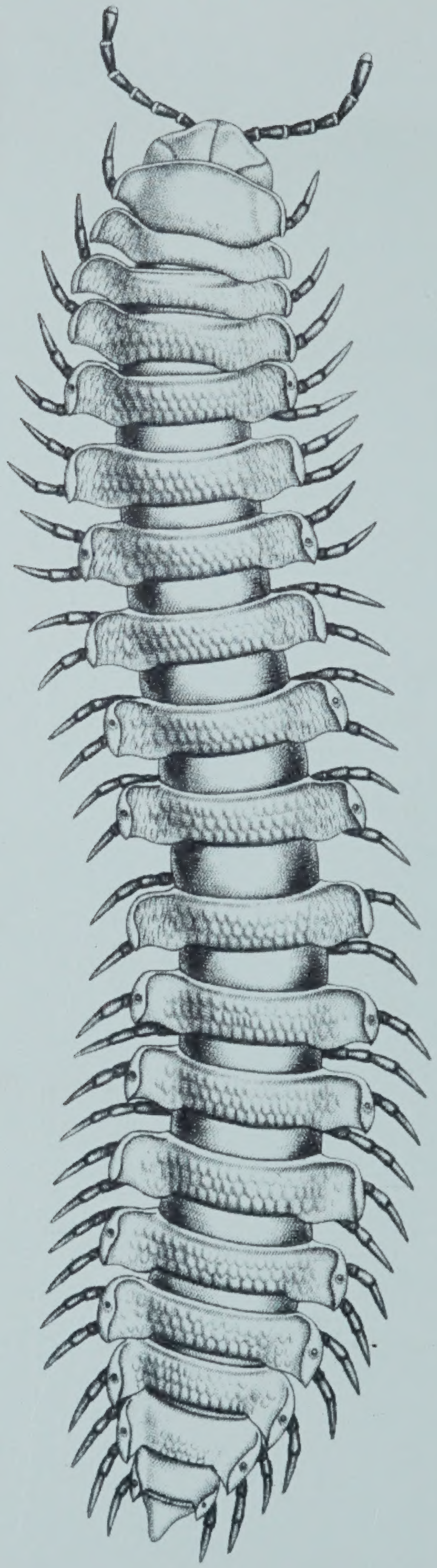

ISBN 1-884549-12-8

9781884549120